Introduction of the digitization software GDgraph

Workshop on EXFOR Compilation (Vienna)

CHEN Guochang
cgc@ciae.ac.cn

China Nuclear Data Center
China Institute of Atomic Energy (CIAE)

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2. GDgraph: A graph digitizing software
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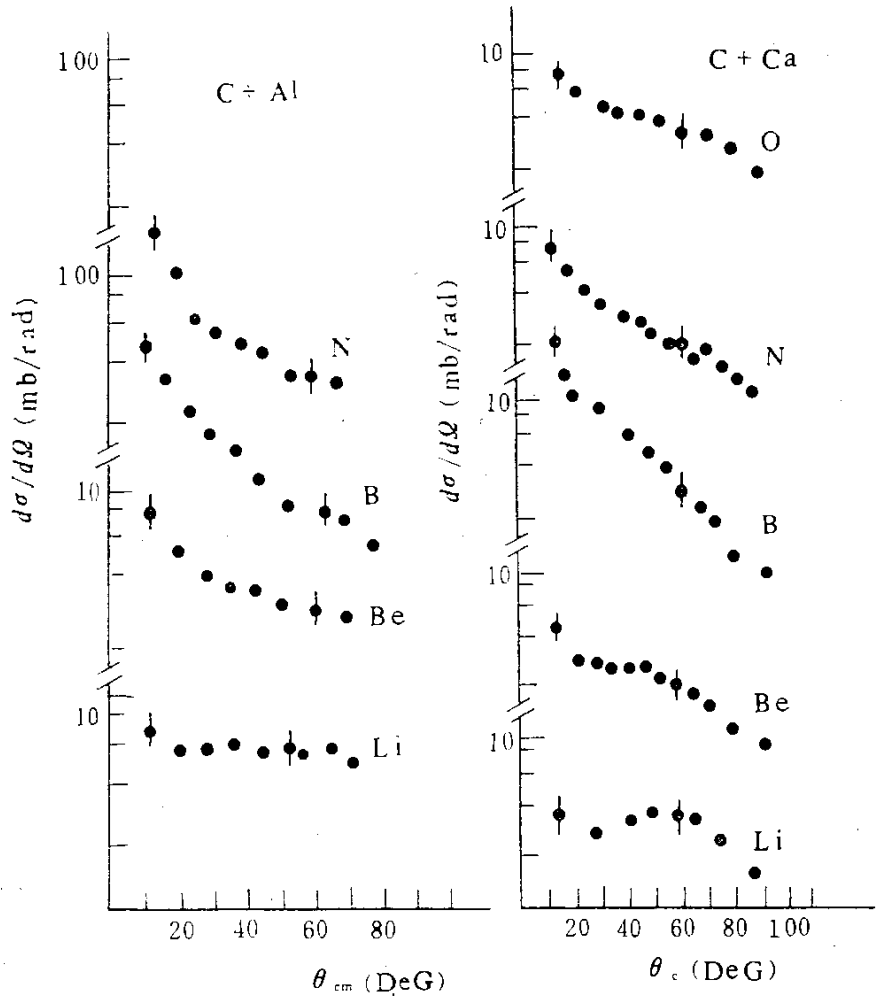
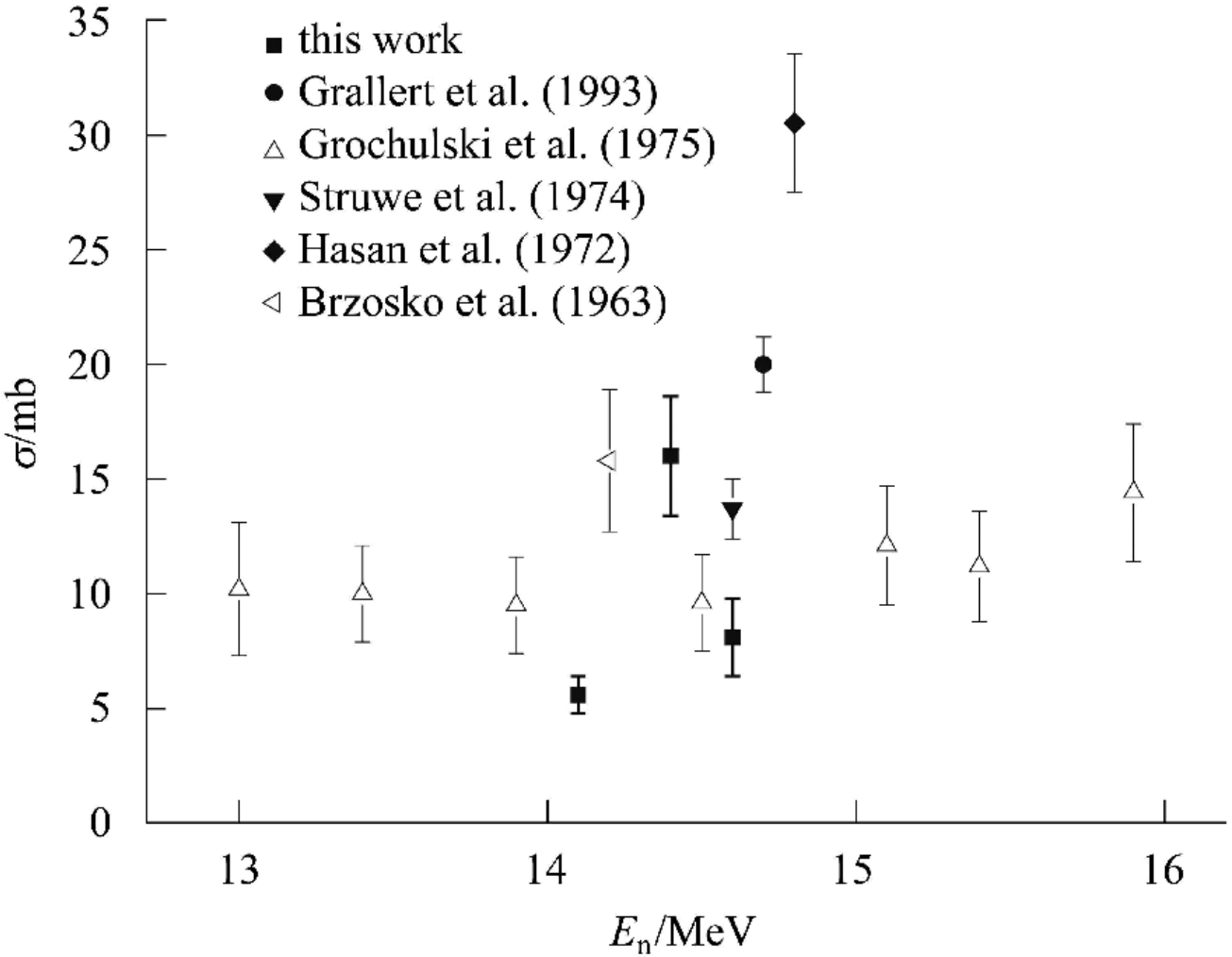
Introduction

1. Evaluators & Experimenters always desire experimental data sets (heavy ions)



Introduction

2. Data are often published on figures without numerical values



Introduction

3. The quality of figure isn't good enough

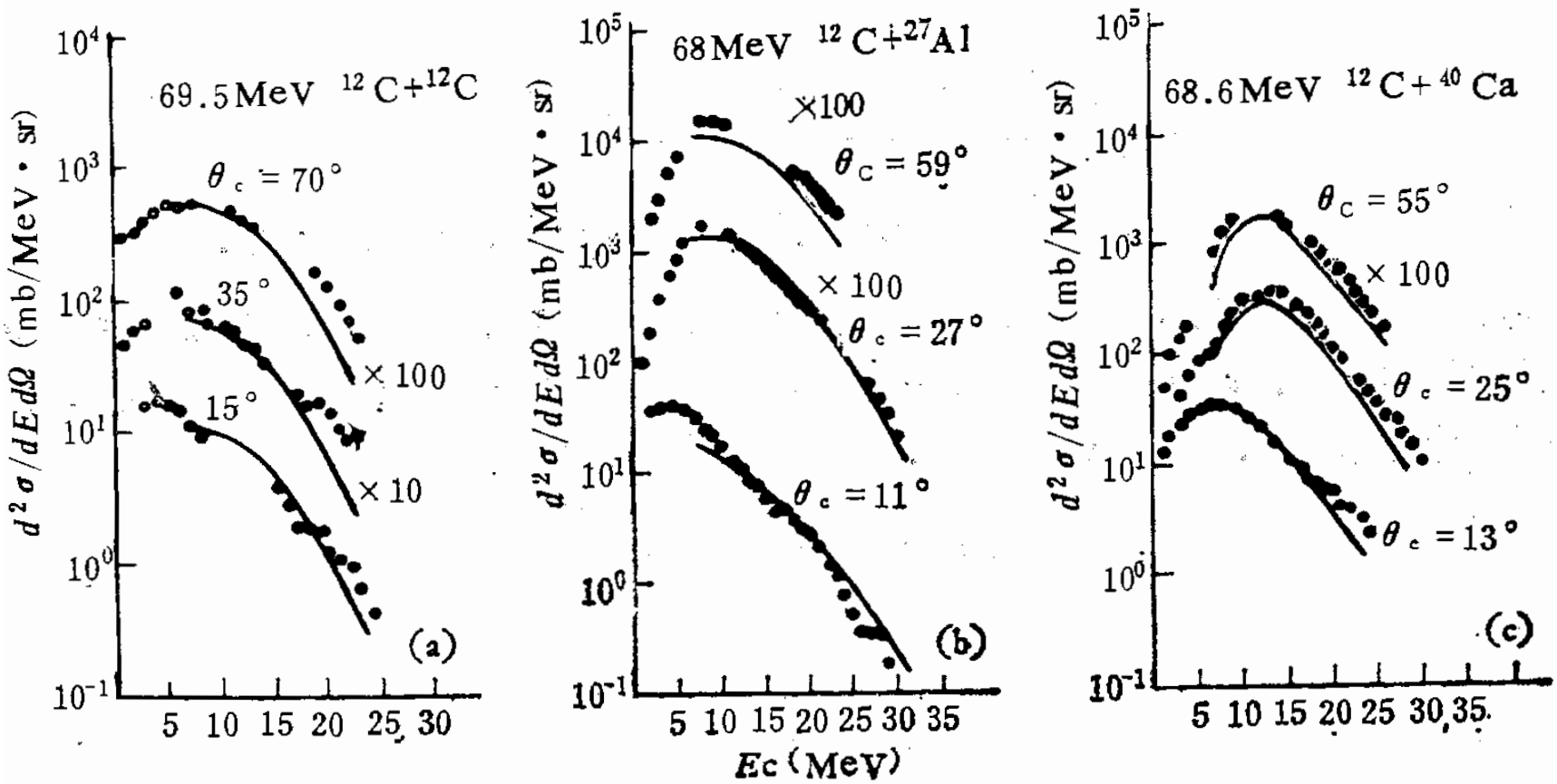


图 3 双微分能谱图 ∘是实验点. 曲线是理论计算结果

Introduction

4. Difficult to identify the point in figure

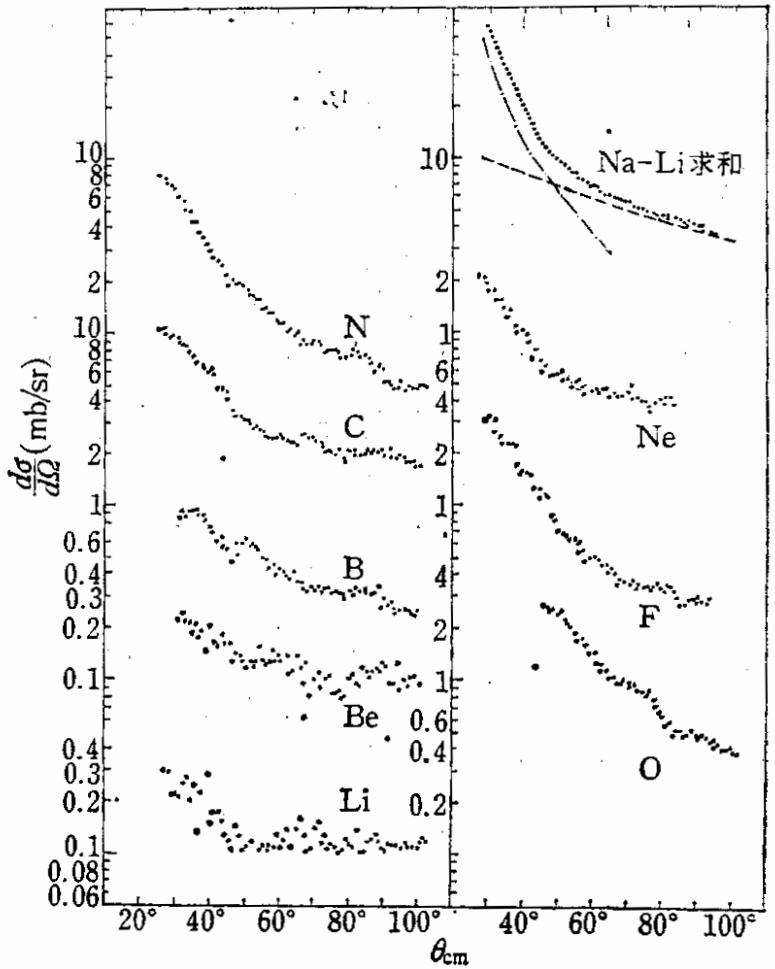
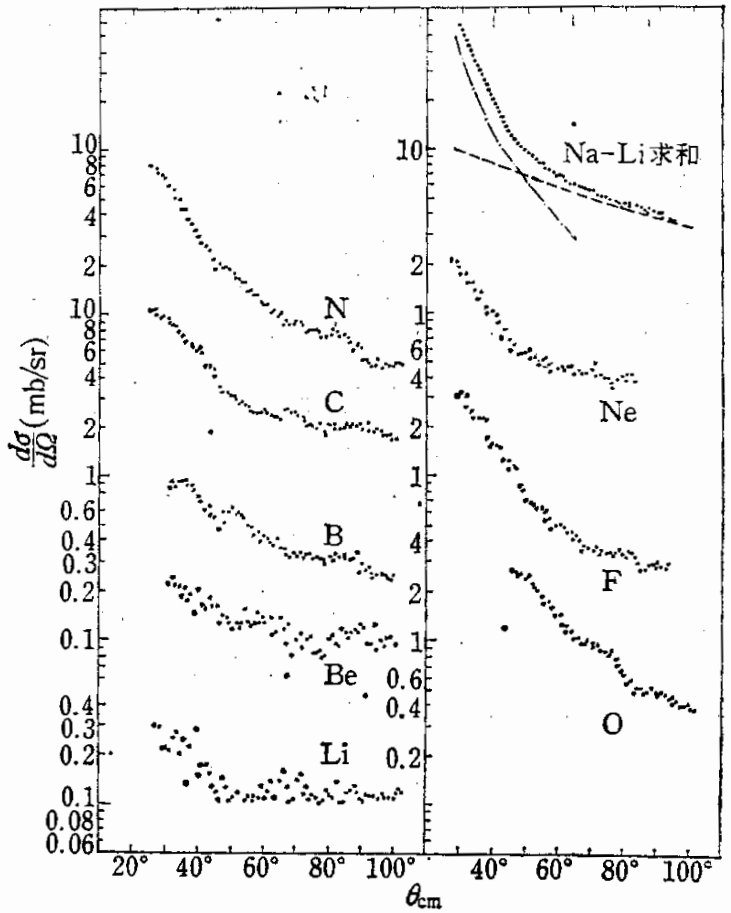


图 2　不同出射元素的对全能谱积分的角分布．图中标 Li—Na 的曲线是对 Li—Na 求和，对全能谱积分的角分布．

Introduction

5. Researchers should not waste time to digitize numerical data on publications



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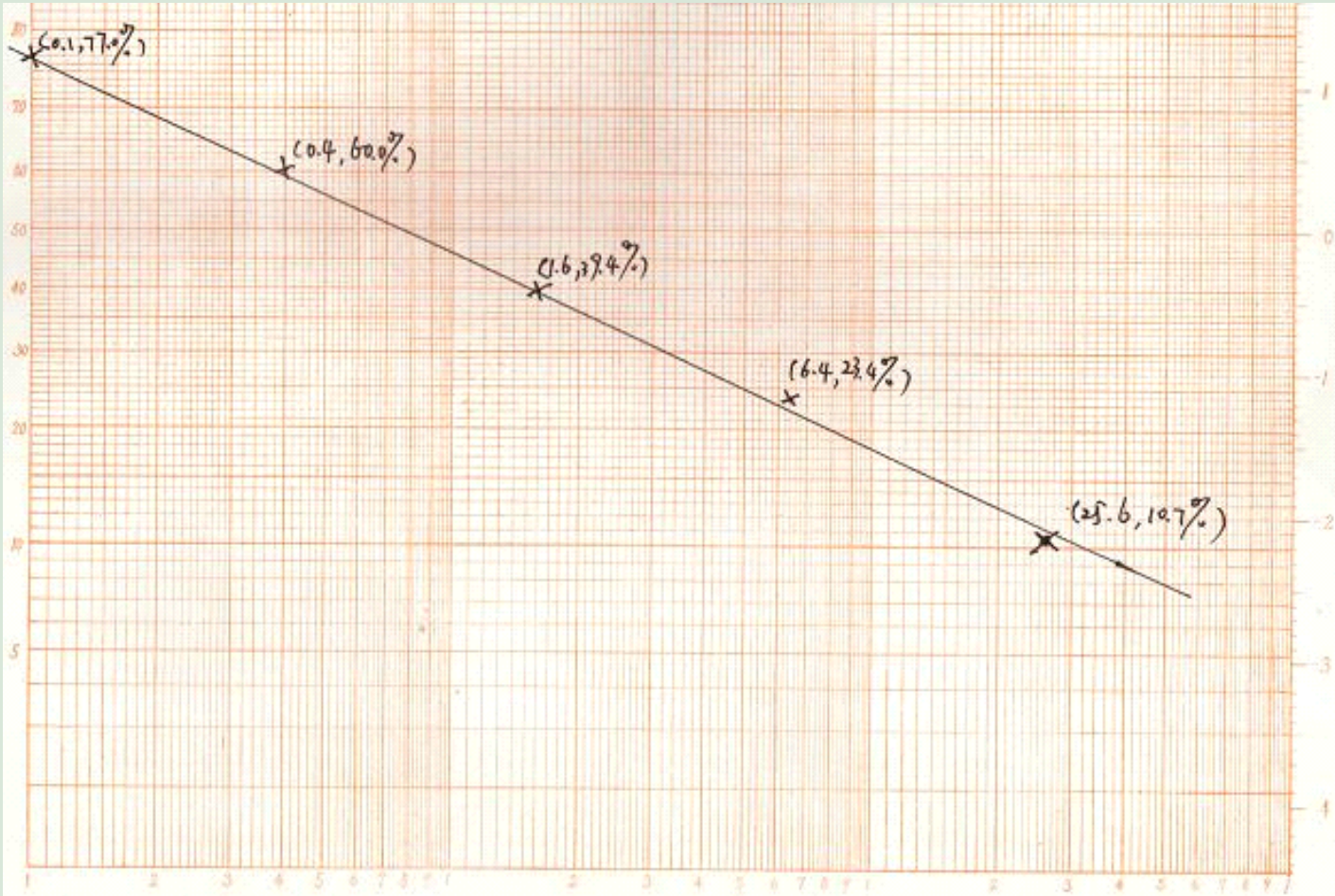
1. Requirements from evaluation & measurement



GDgraph: A graph digitizing software

Short history

1. Requirements from evaluation & measurement
2. Start to develope a software for digitization since 1997
3. GDgraph developes using from VC++ to Perl
4. Version-5.0, Windows and in Chinese & English

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GDgraph: A graph digitizing software

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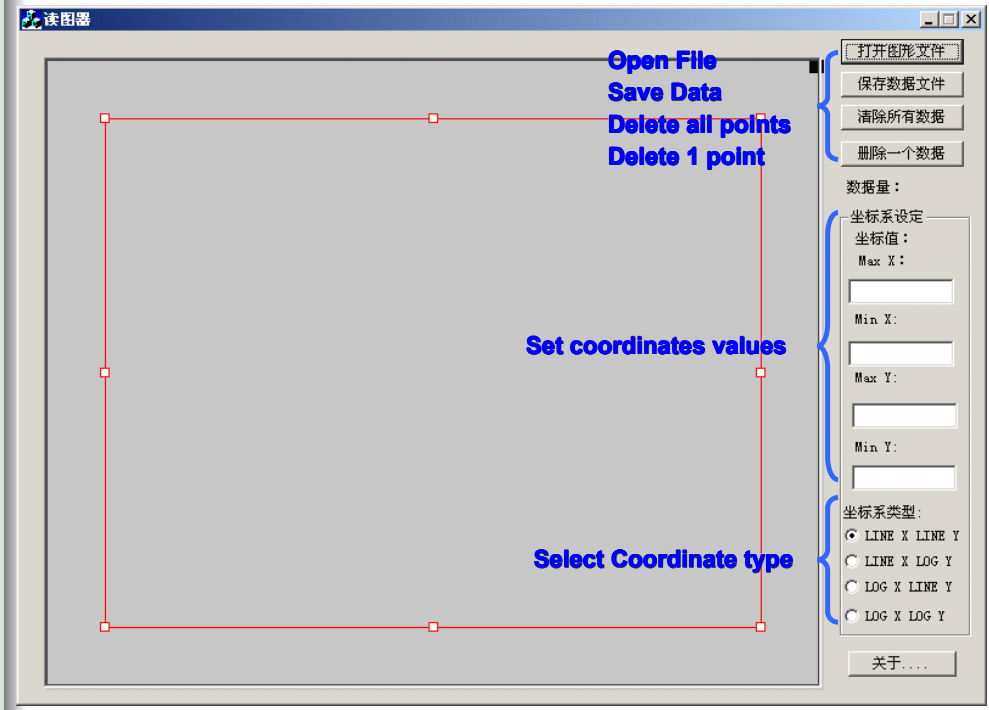
1. 2001 released, VC++
2. Mold of GDgraph fits the basic requirements
3. BMP file is readed only
4. One set data are digitized only
5. Can't change interface size & move point
6. No xy-error, can't randomly delete point



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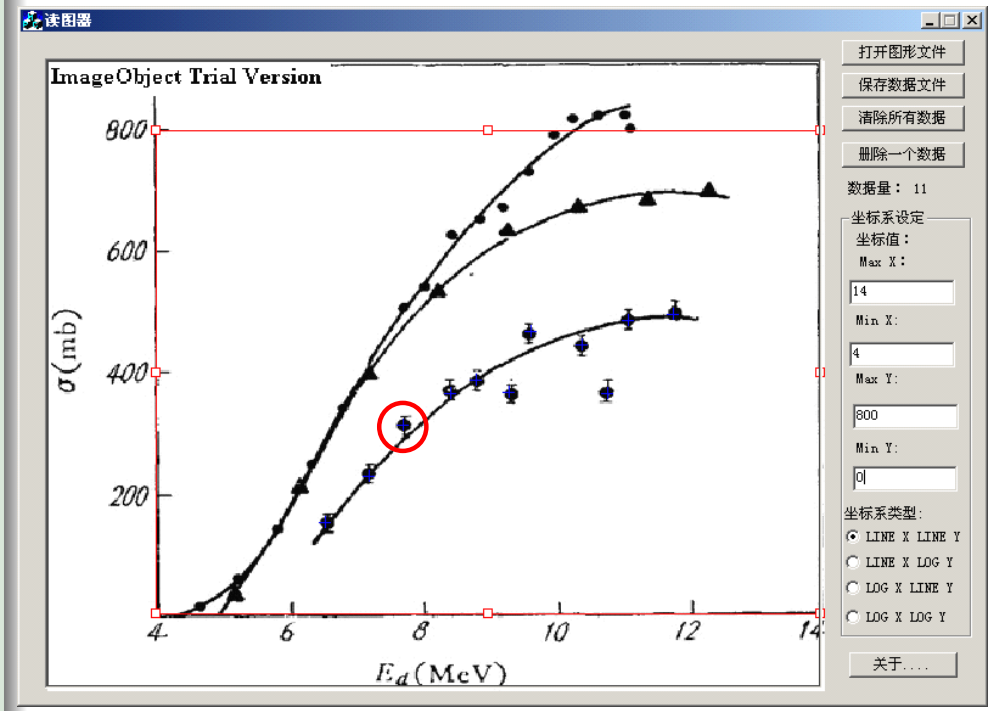

GDgraph: A graph digitizing software

GDgraph-2.0

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2. Graphics file (jpg, png, bmp...)
3. Figure zoom in/out
4. Rotate figure
5. Figure size auto fit to window
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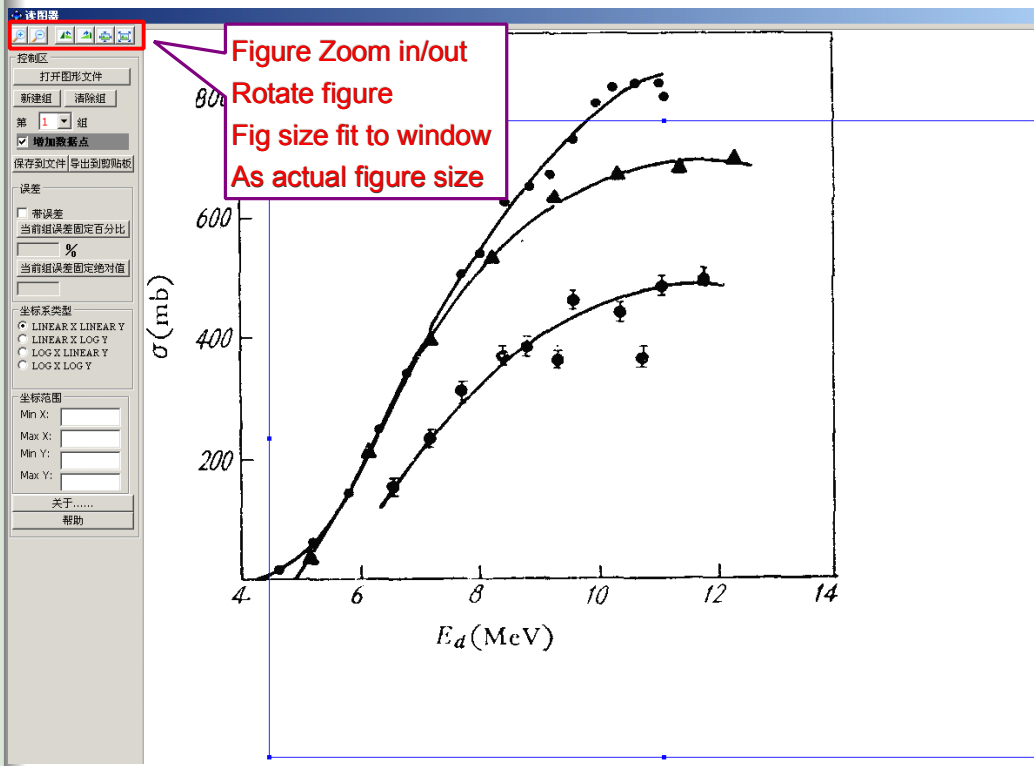

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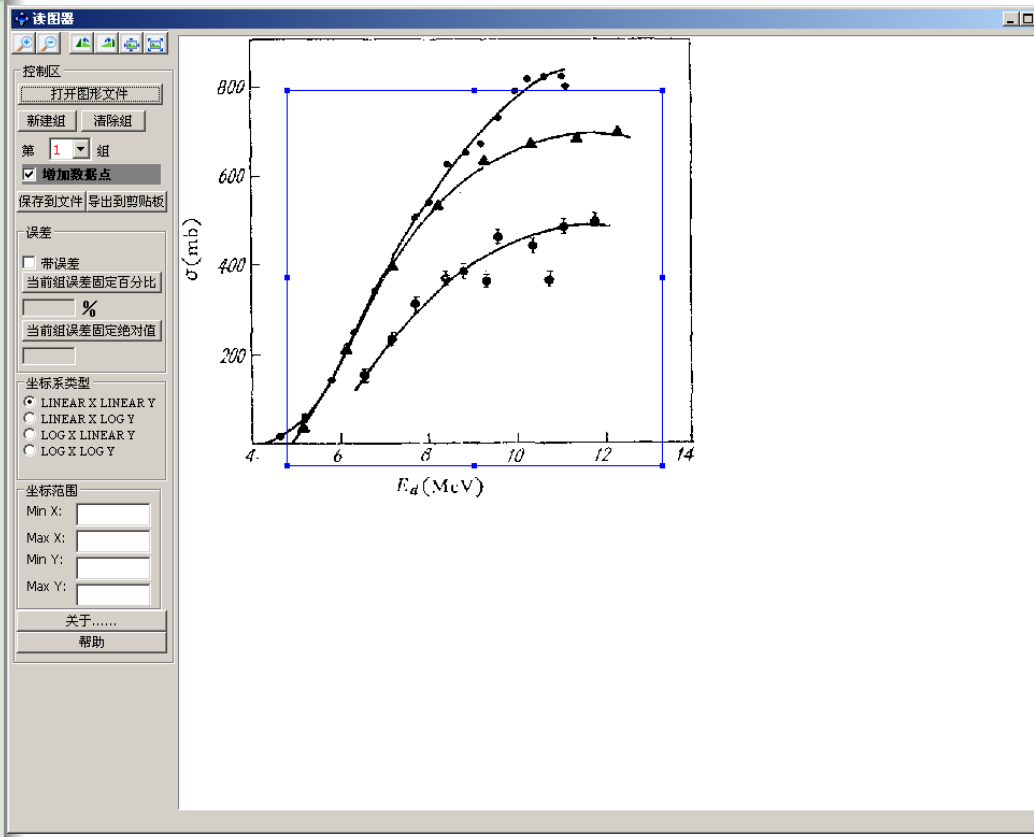

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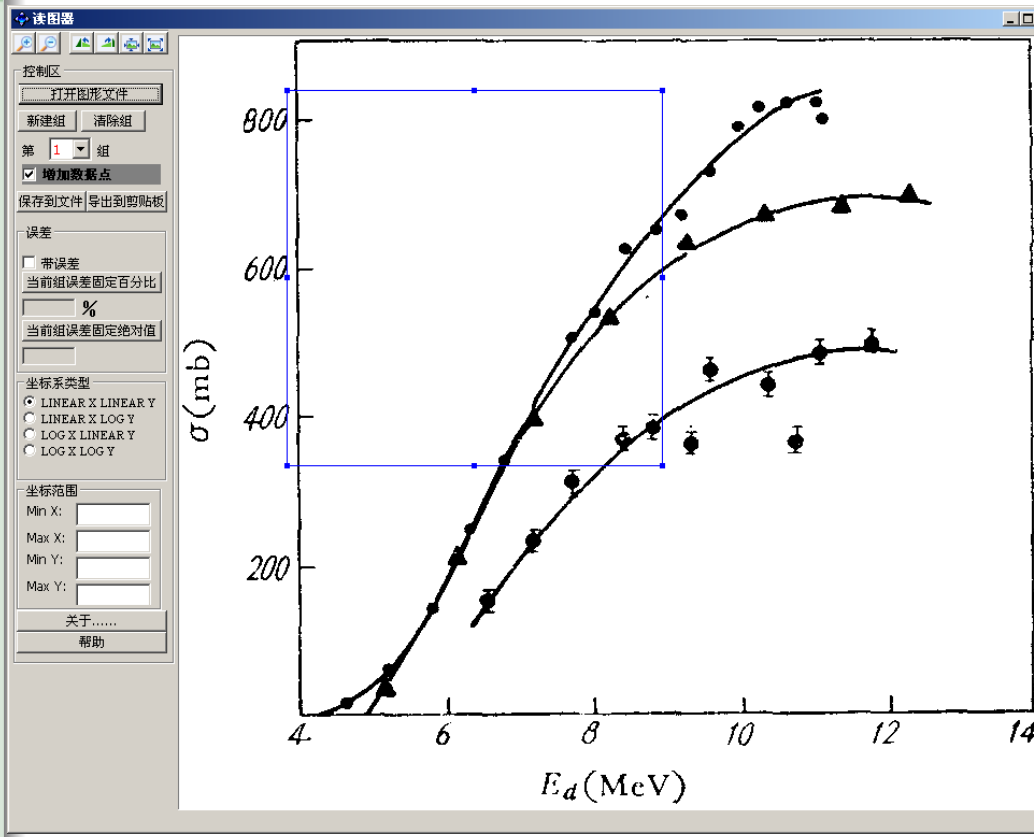

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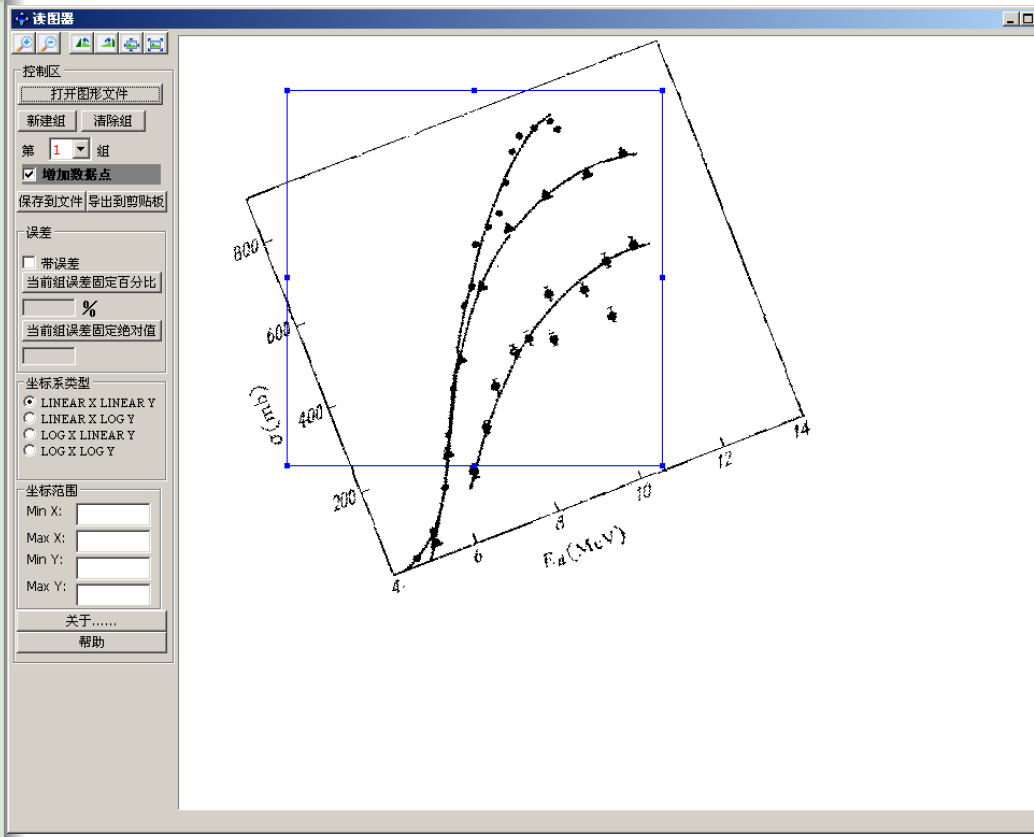

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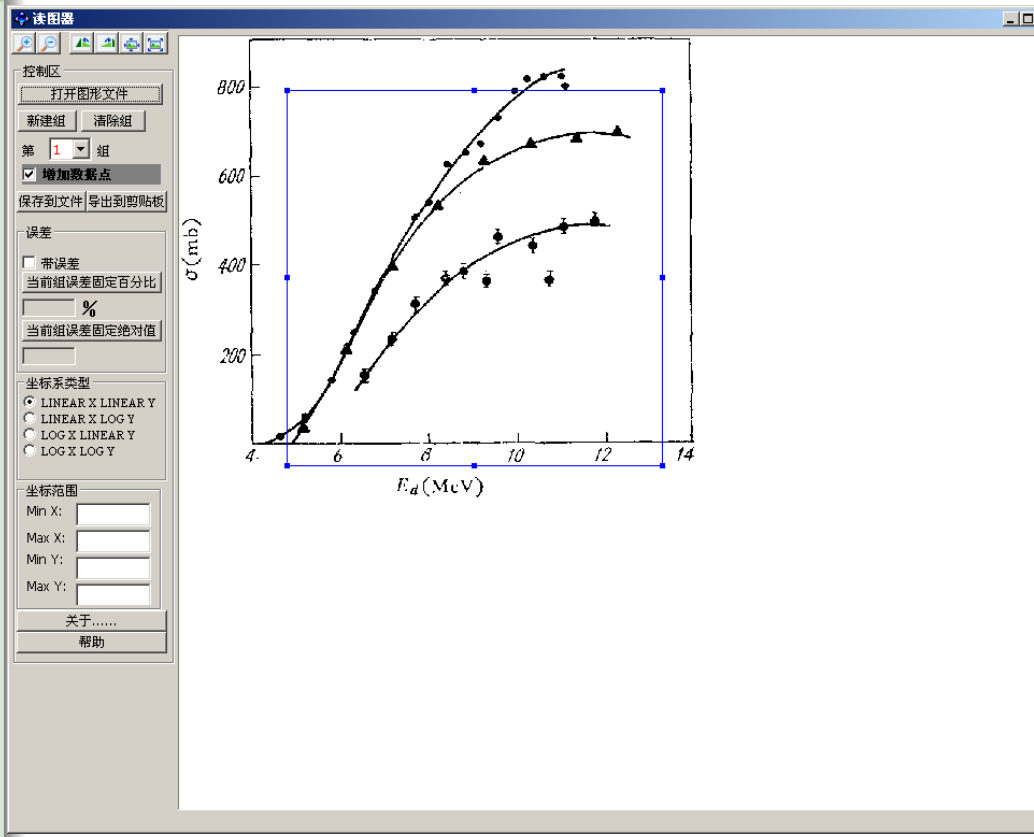

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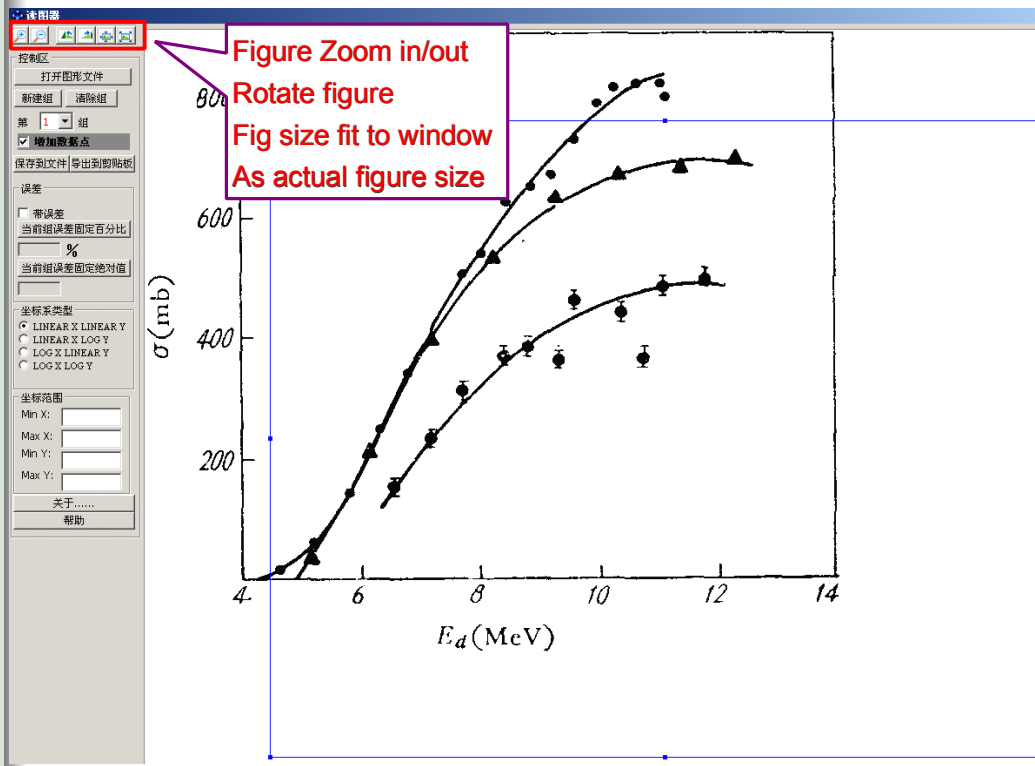

GDgraph: A graph digitizing software

GDgraph-2.0

7. **Add/Del data groups**
   - Max. 3 data groups
   - Blue, red & green represent
8. Add/move point by mouse
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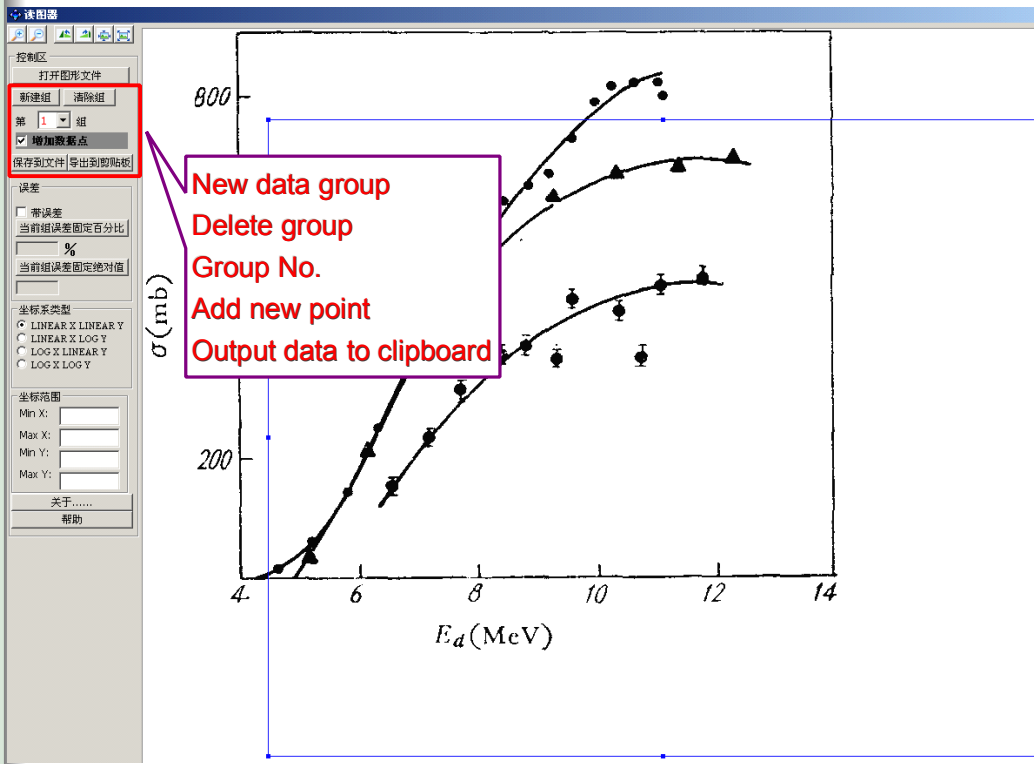

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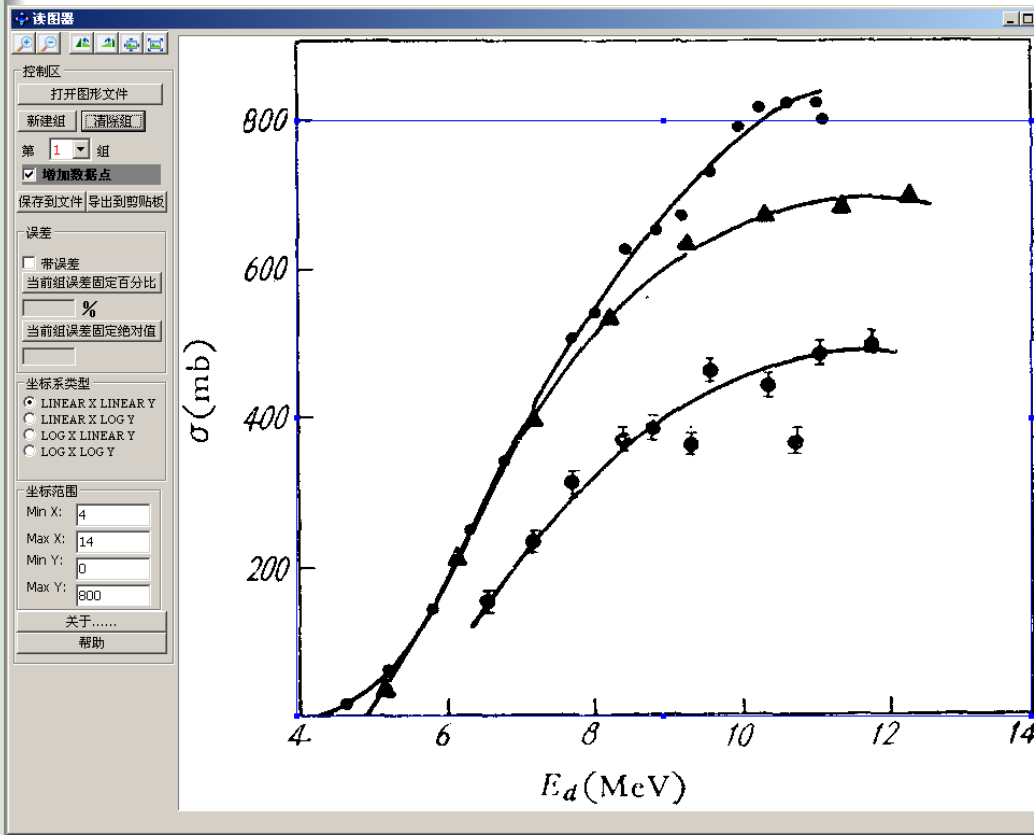

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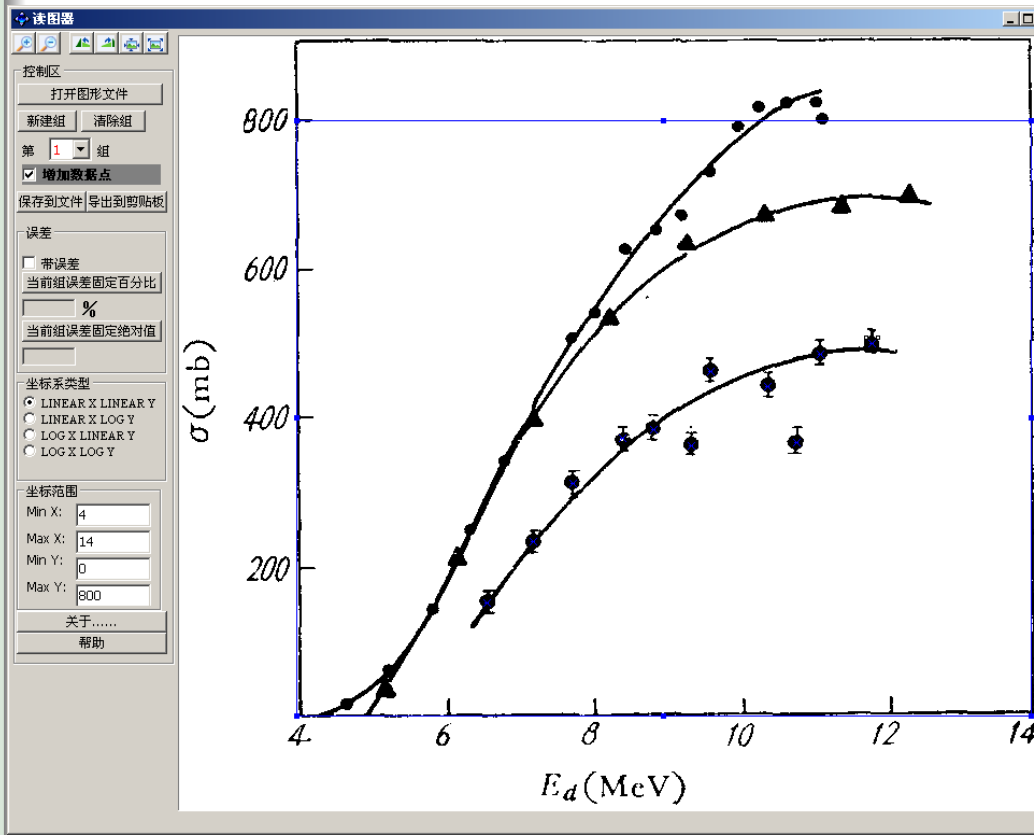

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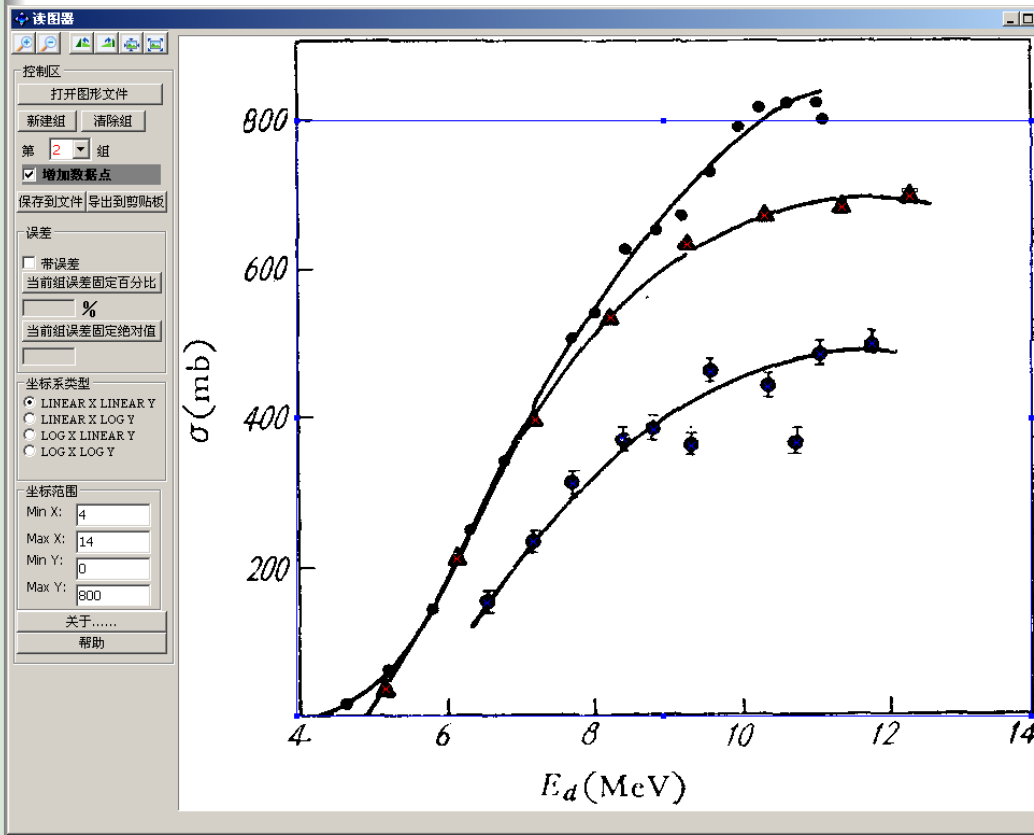

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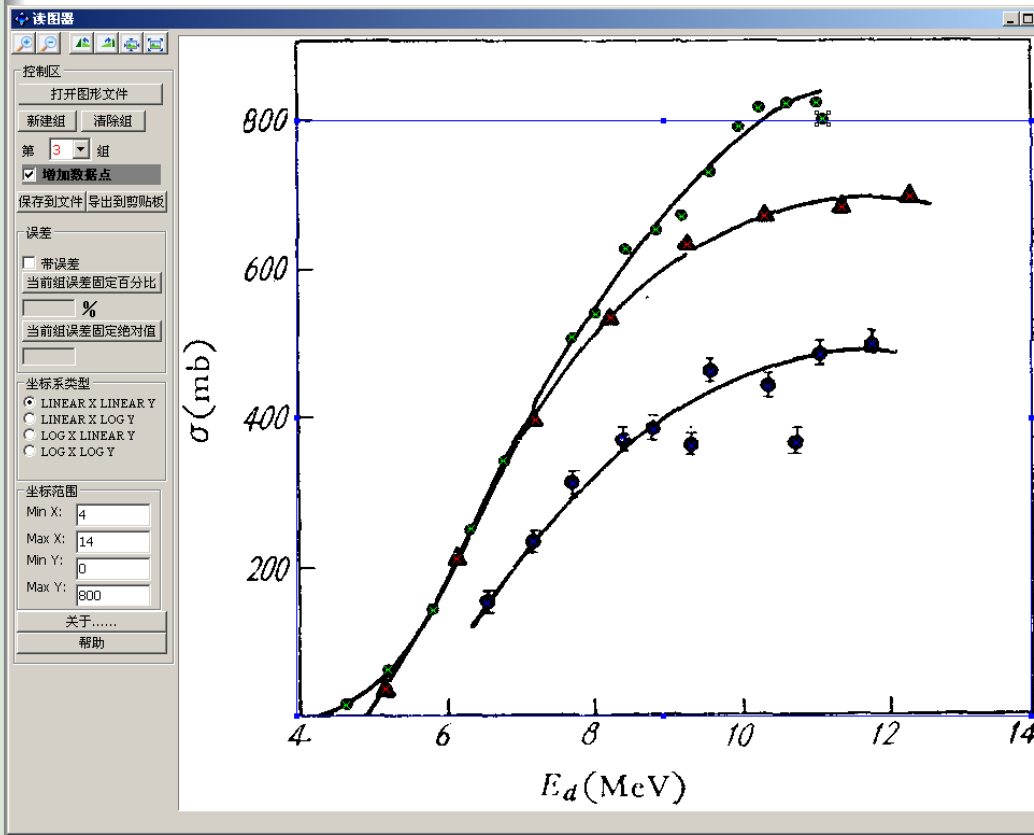

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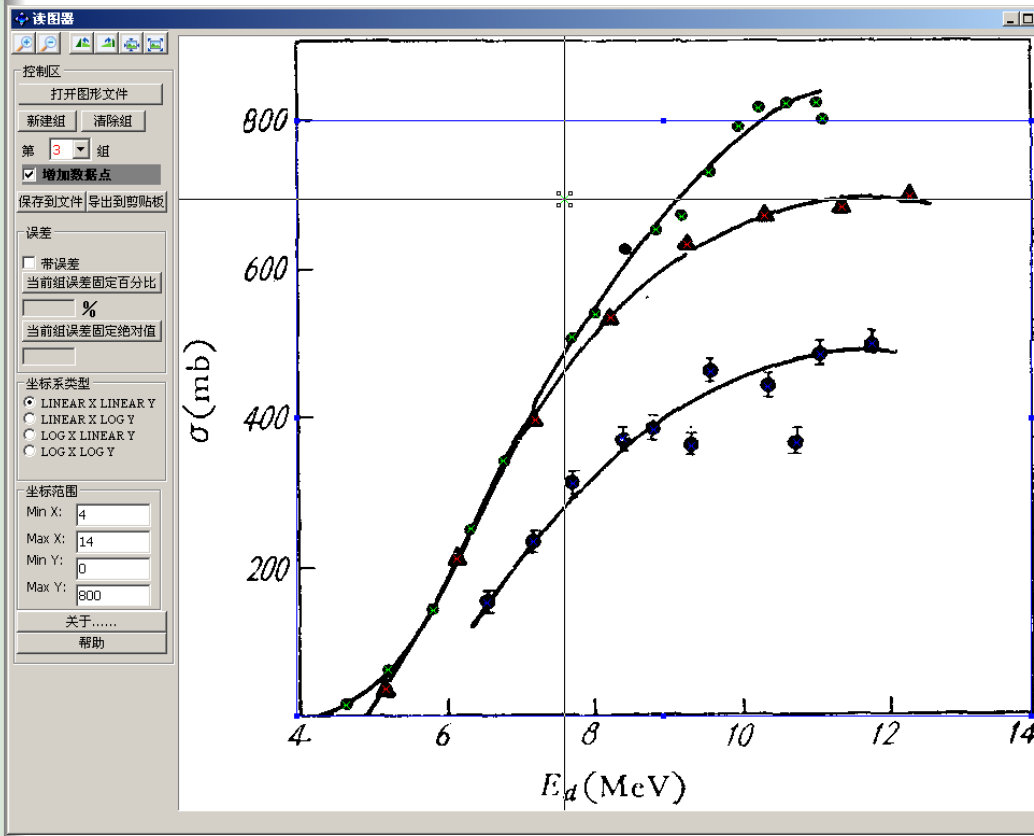

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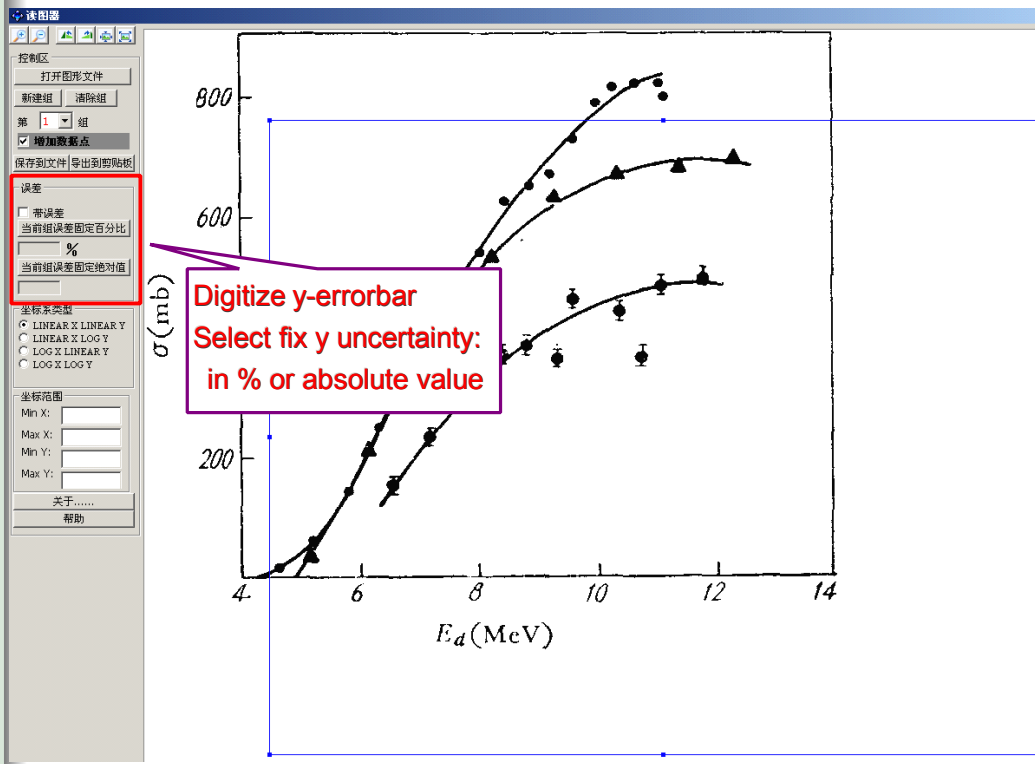

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GDgraph-3.0

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6. Coordinate & fig. zoom in/out together
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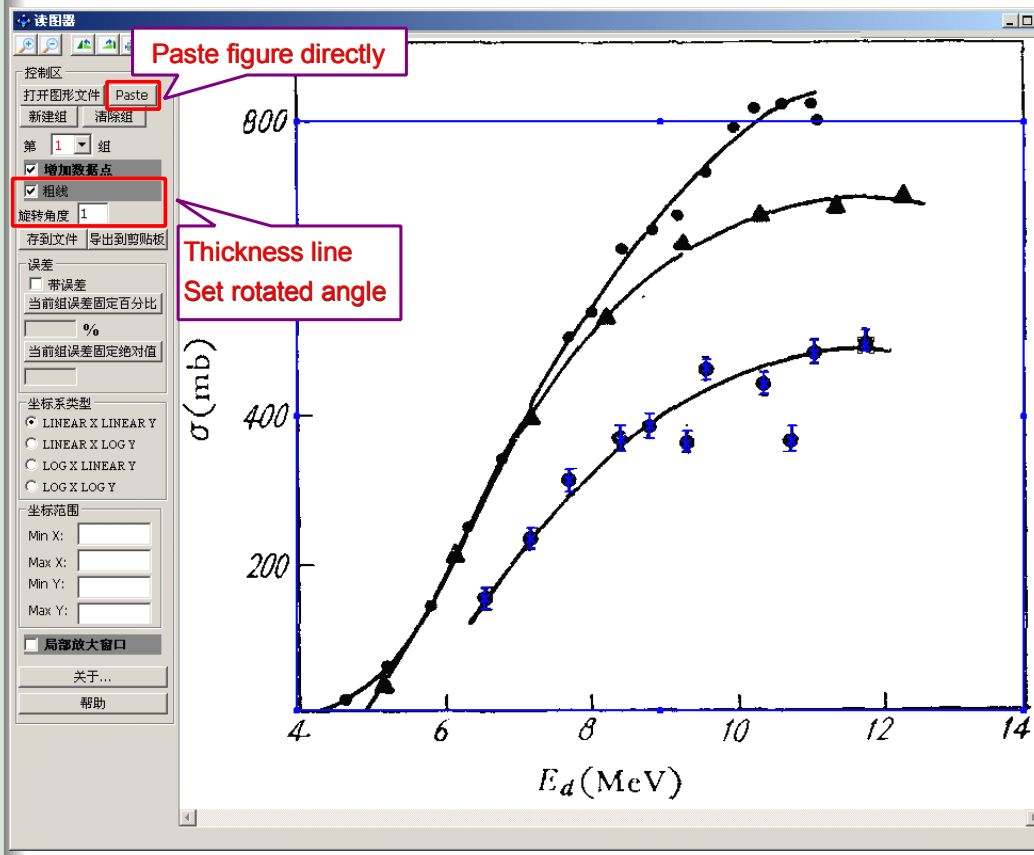

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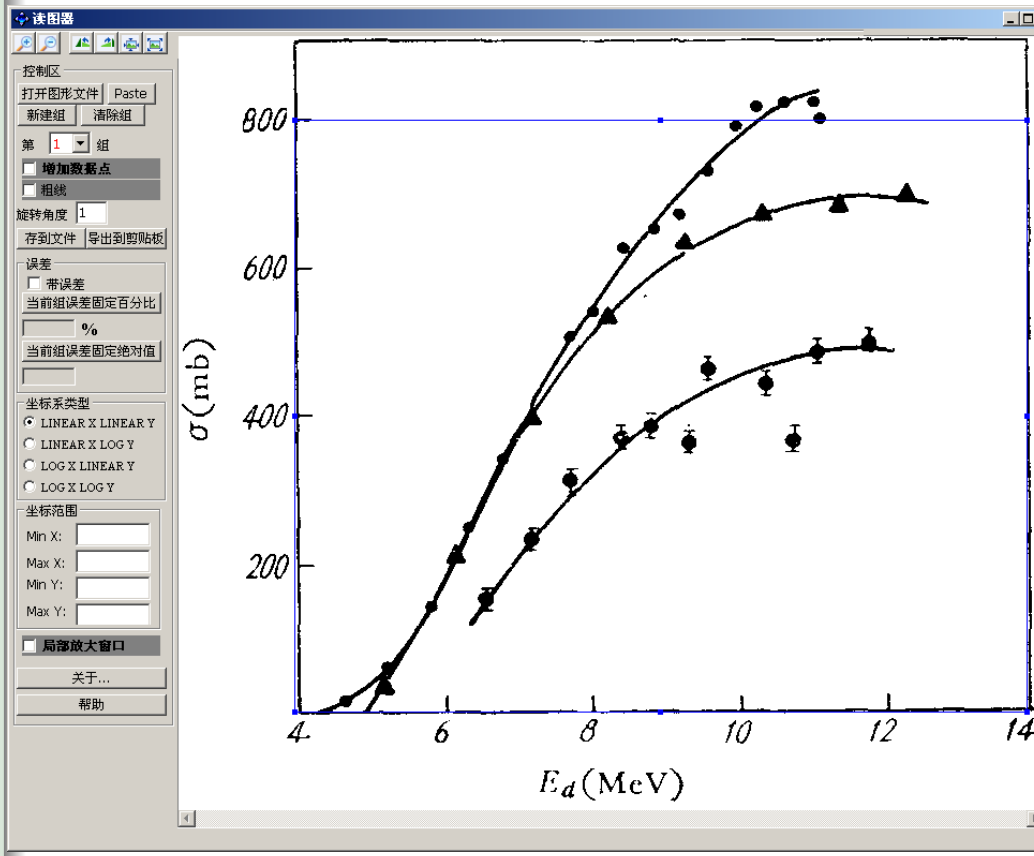

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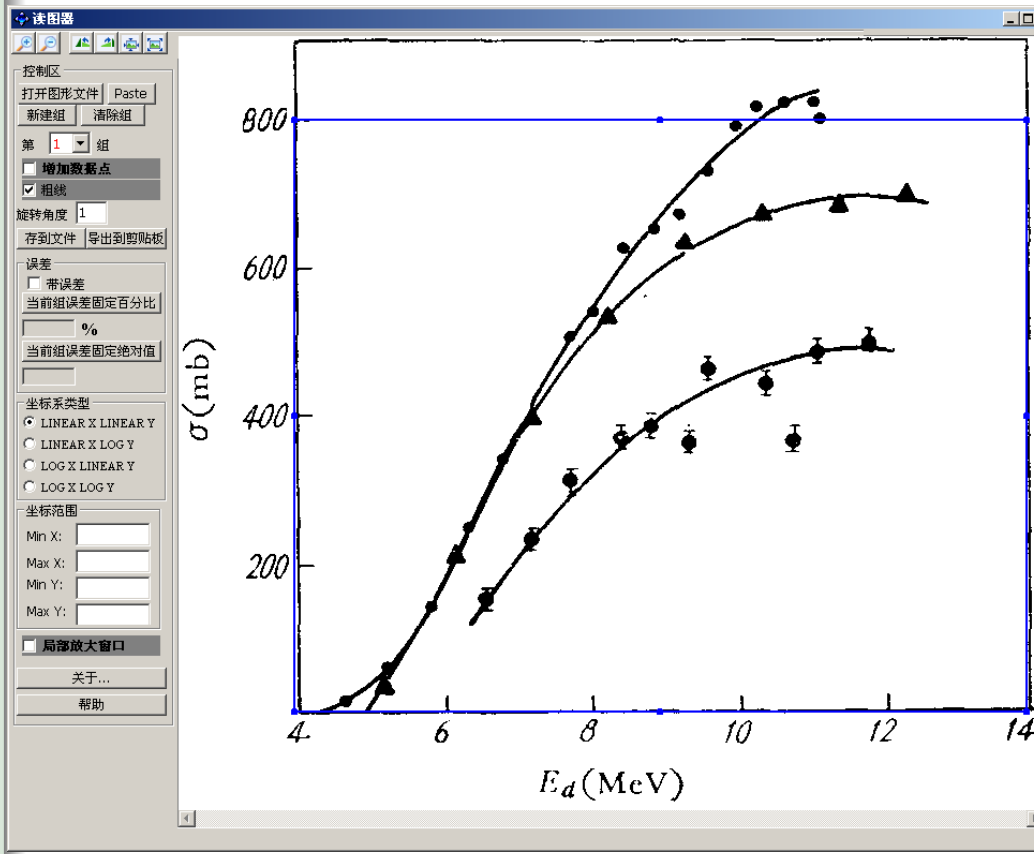

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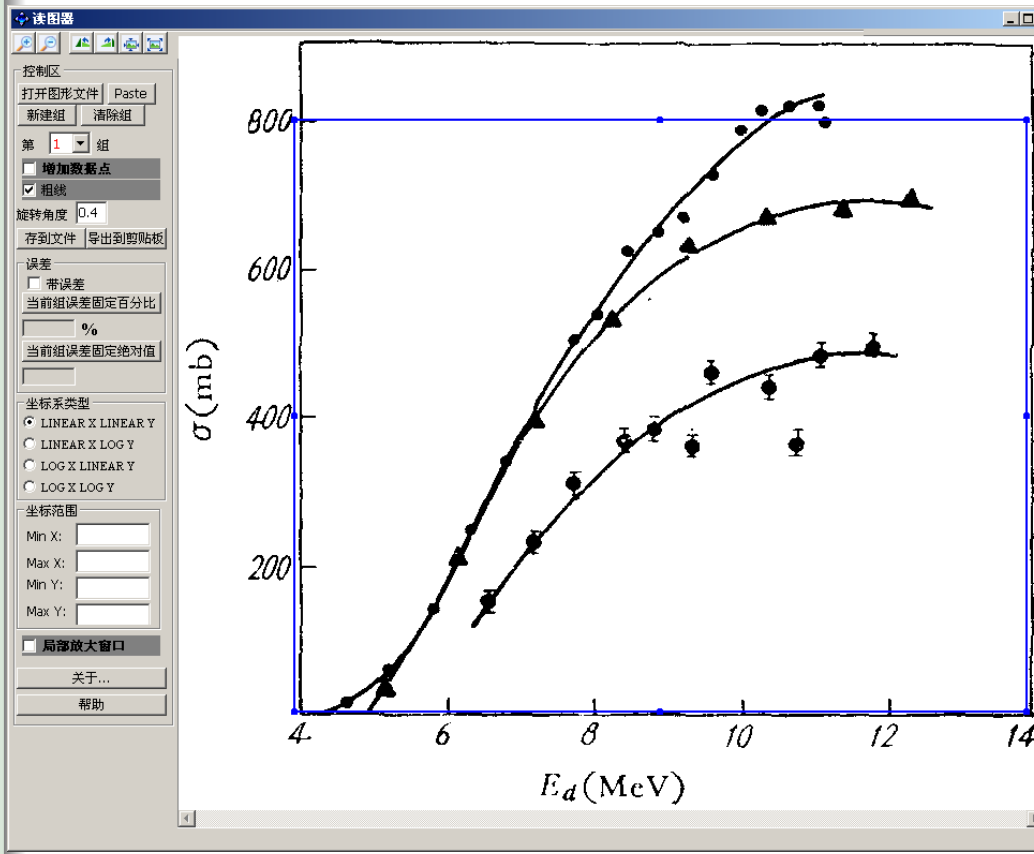

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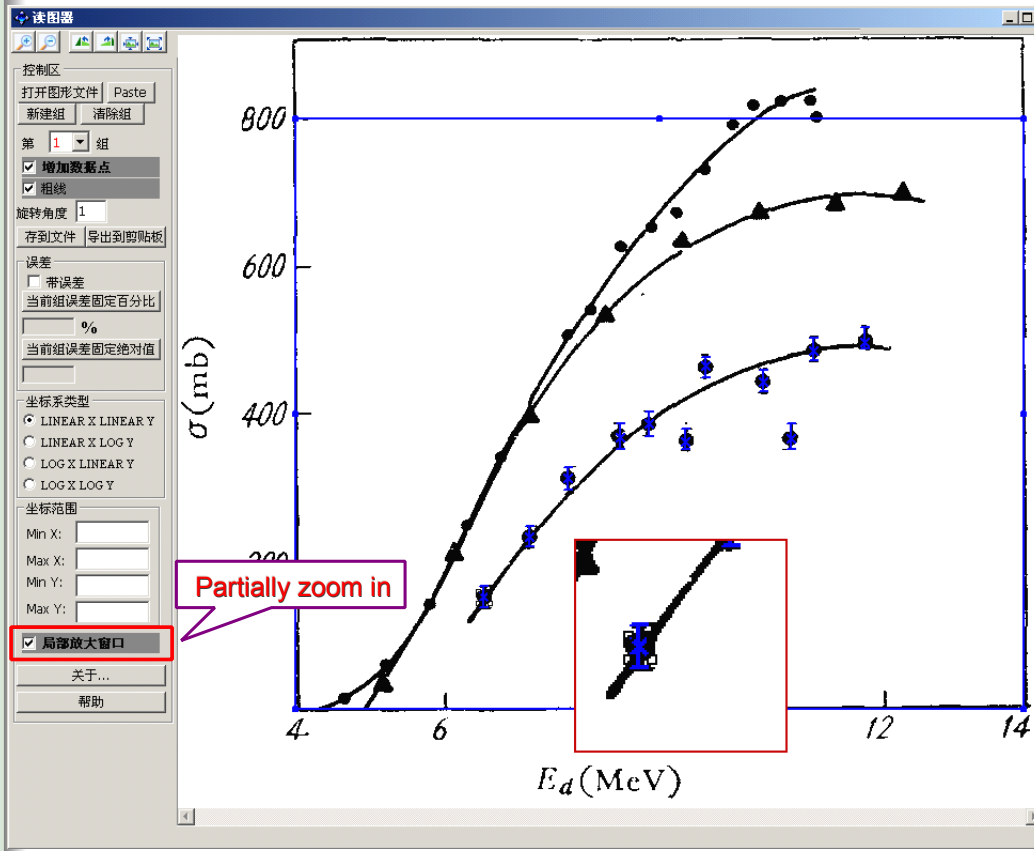

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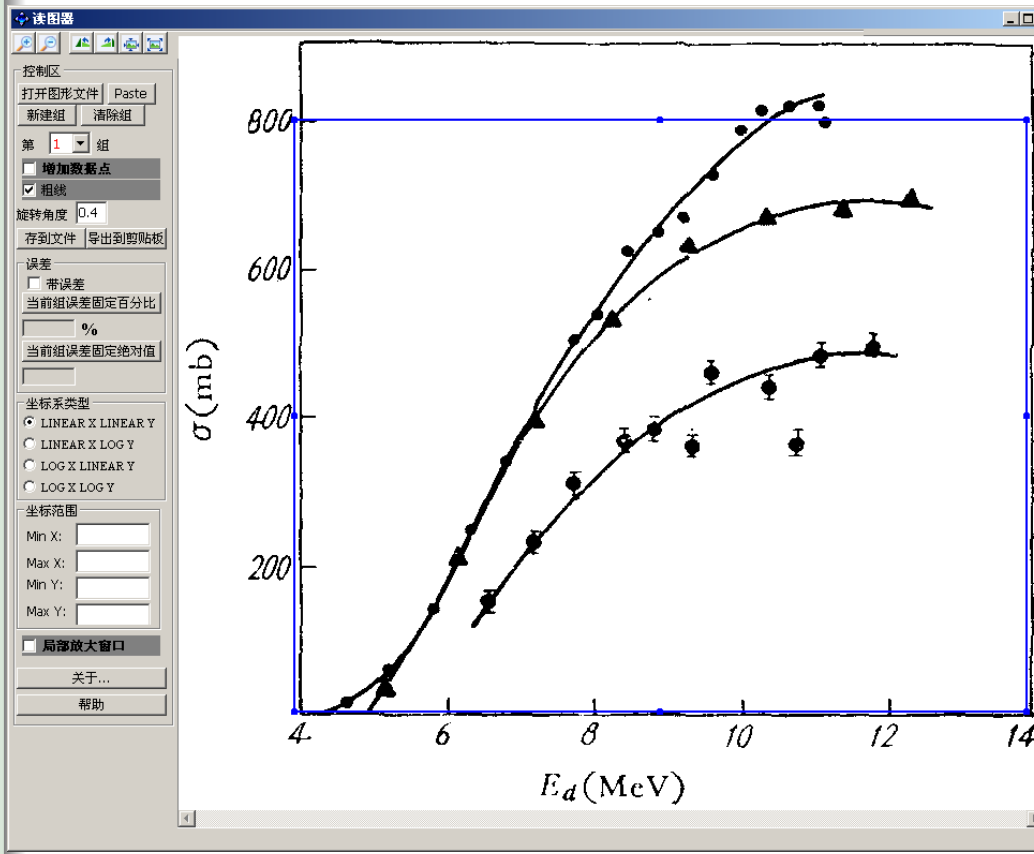

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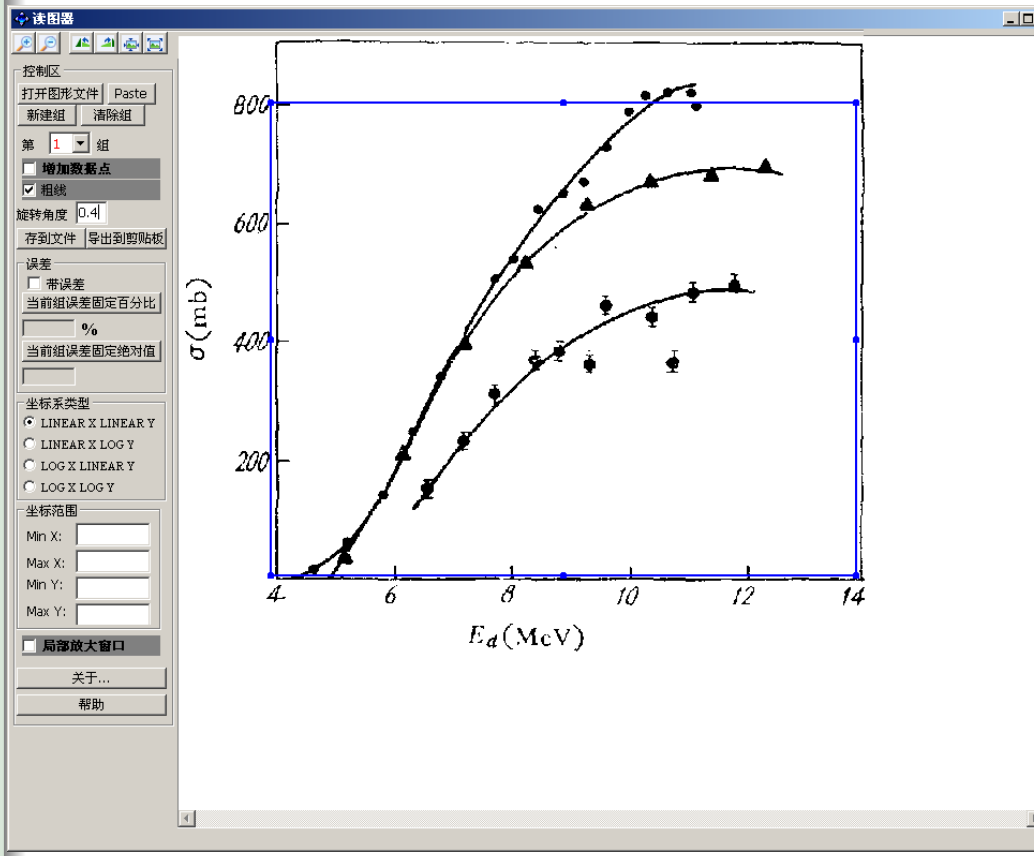

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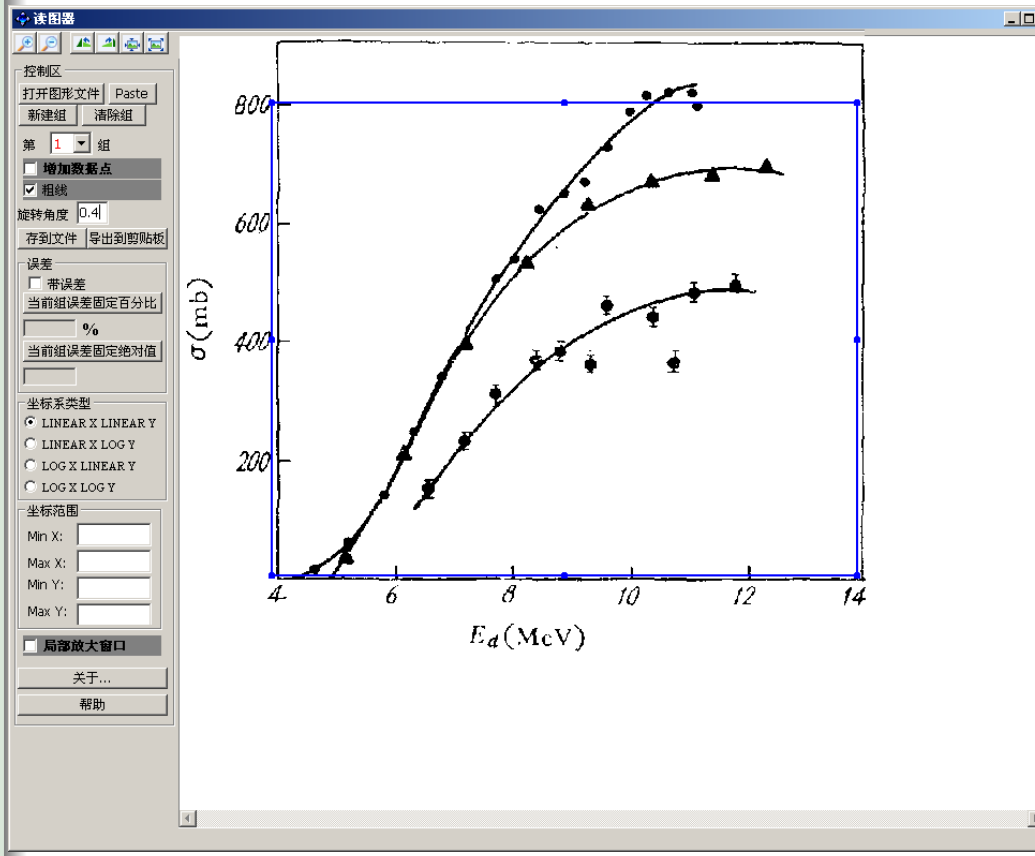

GDgraph: A graph digitizing software

GDgraph-4.4

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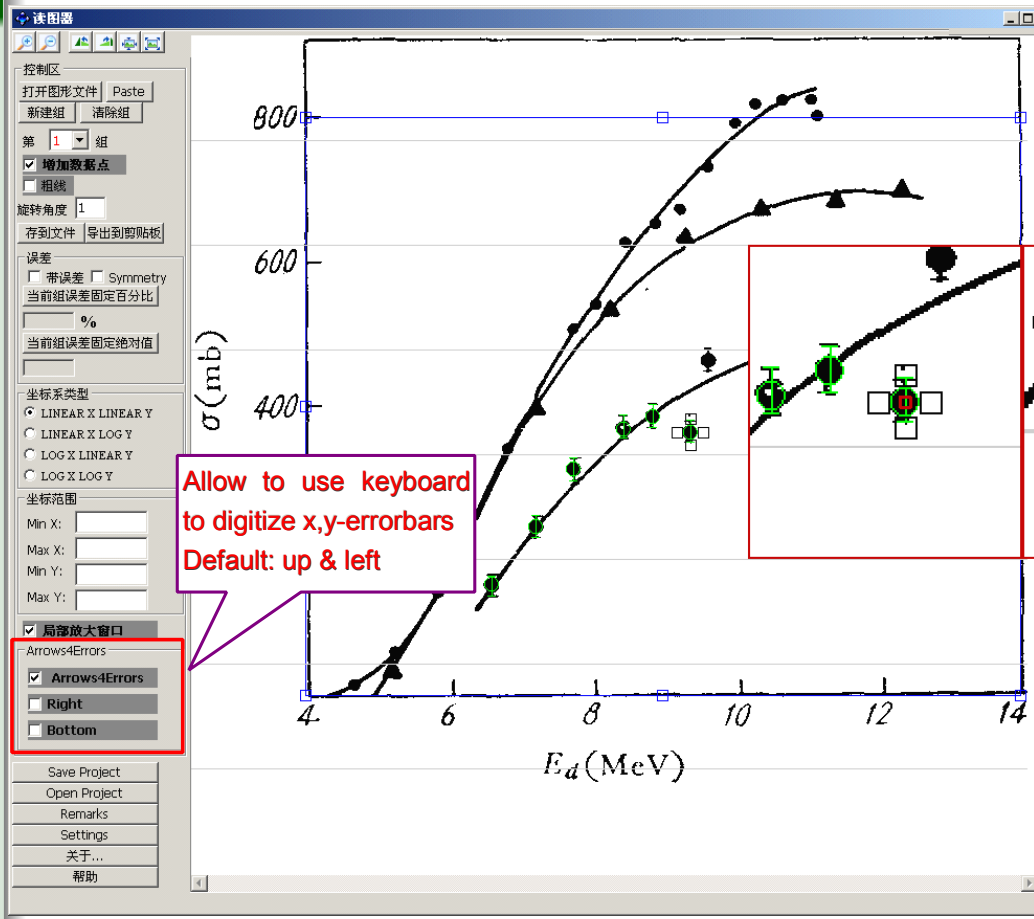
2. Allow to digitize x error & use keyboard to move errorbars
3. Add Project & Remarks function
4. Add Setting function
5. Allow to move partially zoom-in window



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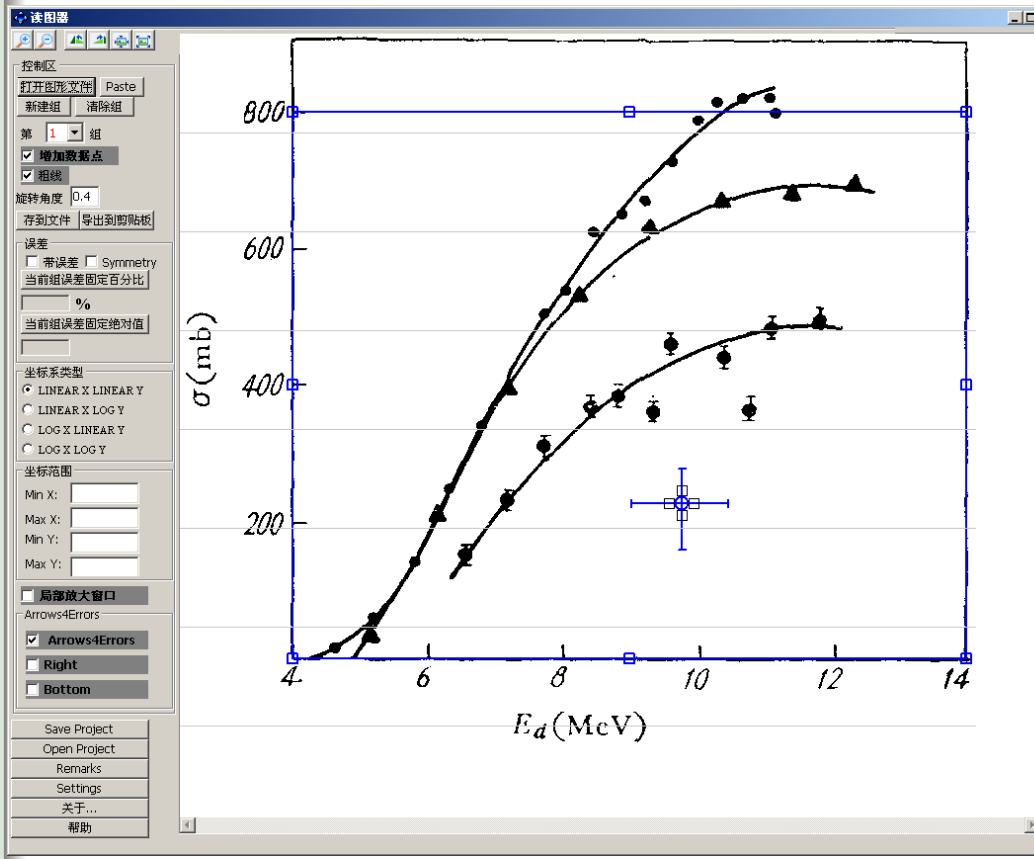

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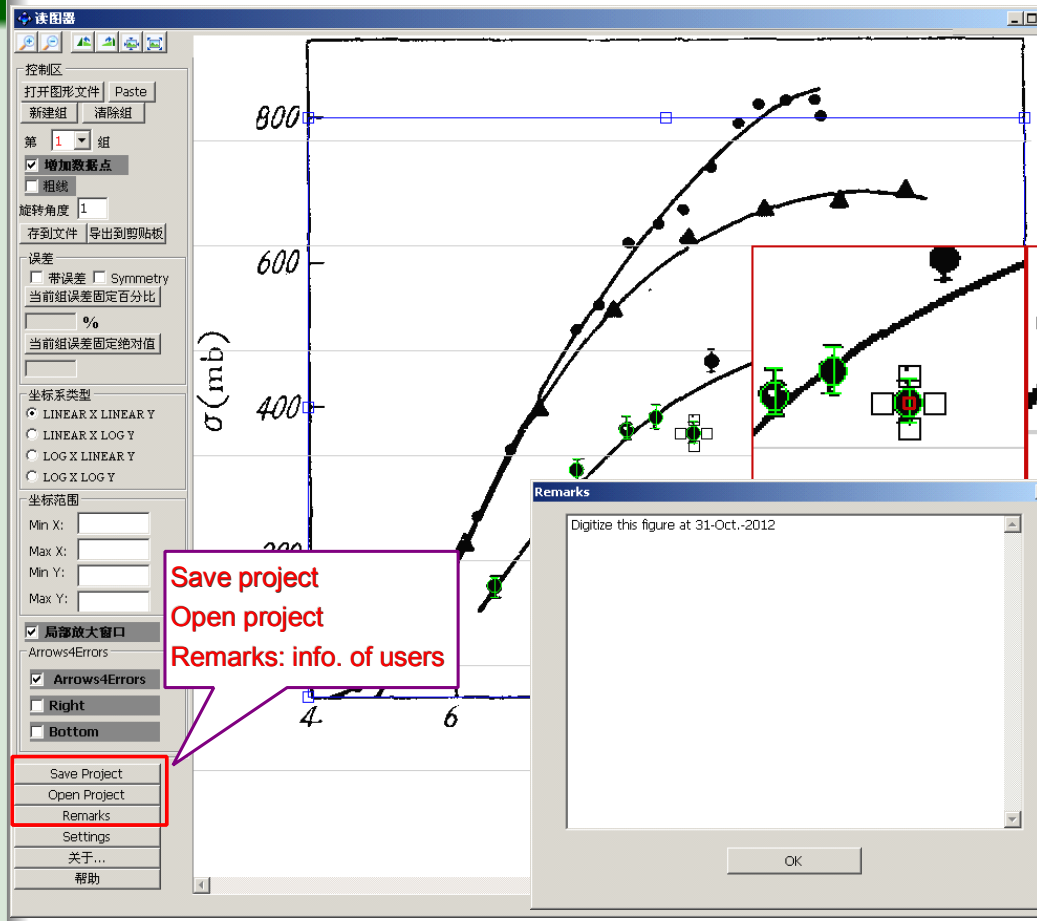

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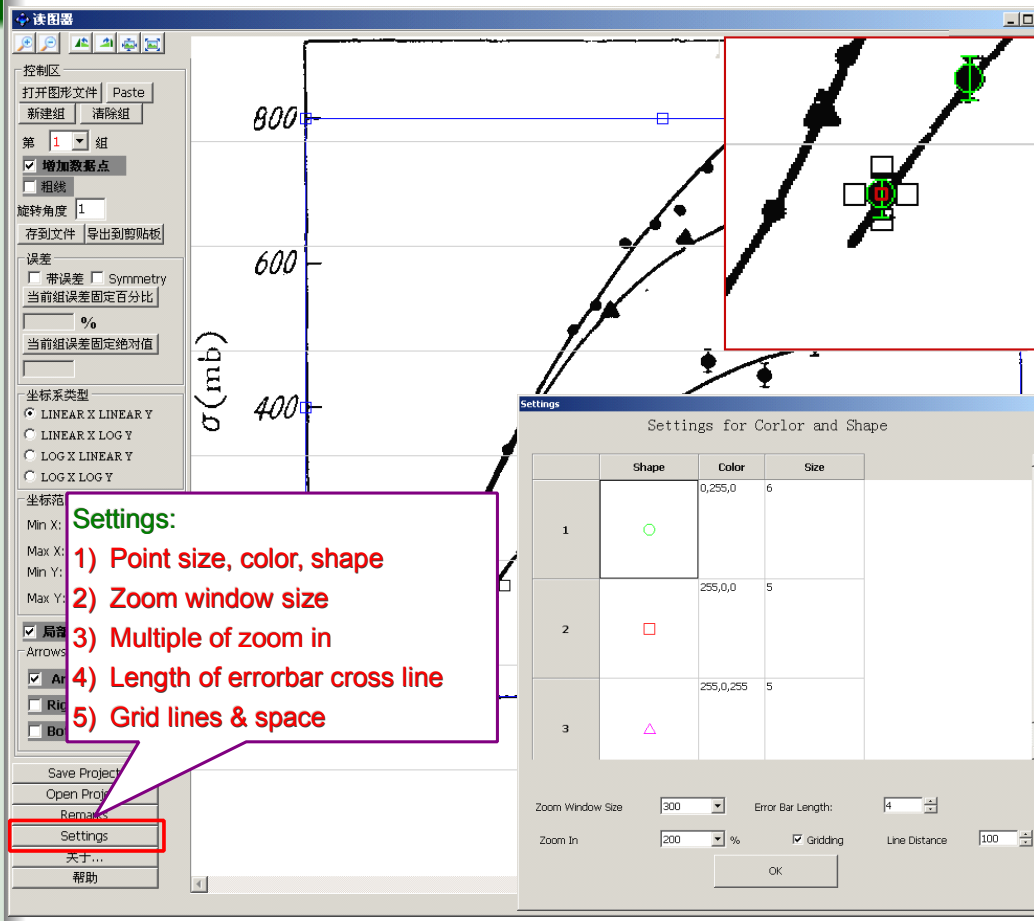

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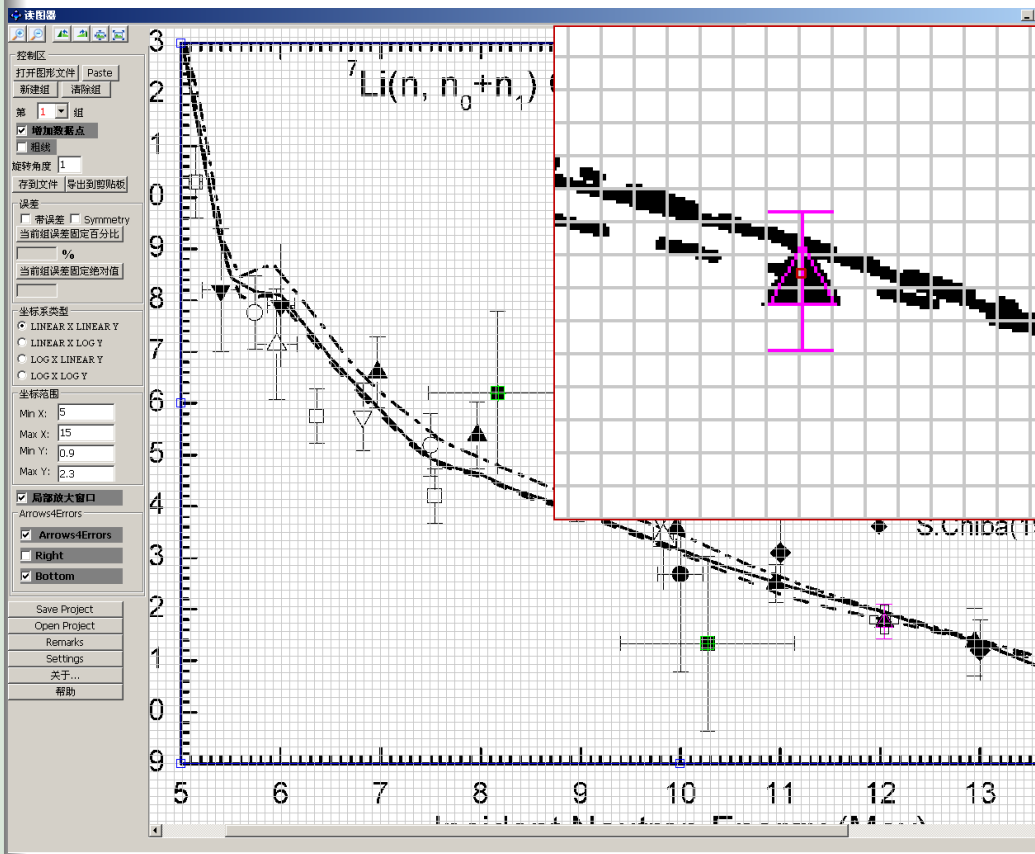

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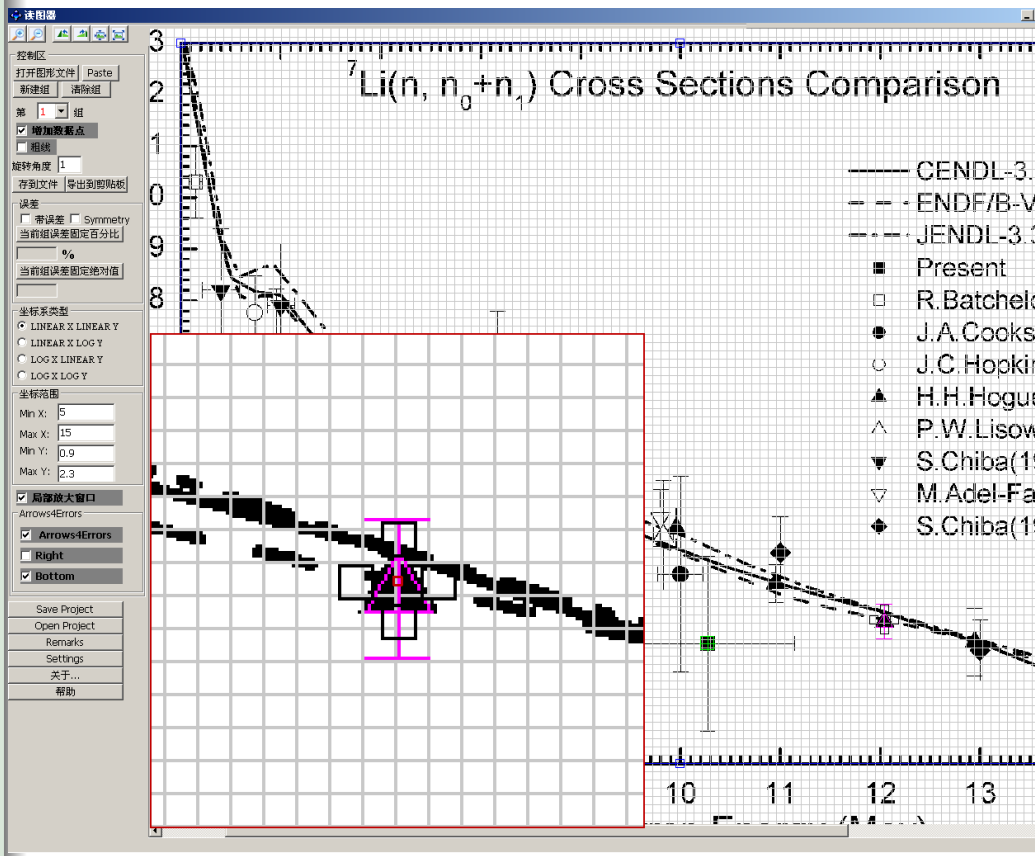
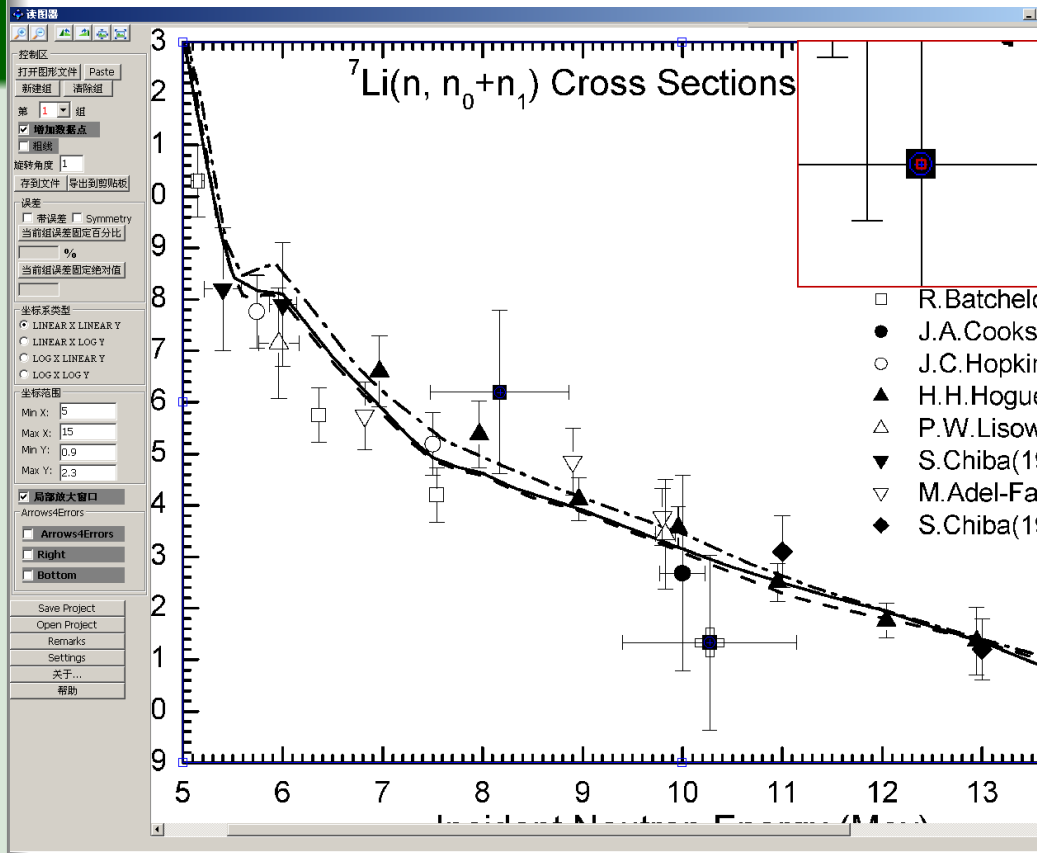


GDgraph: A graph digitizing software

GDgraph-4.4: Setting Function

1. Point symbol
2. Point color
3. Point size
4. Zoom-in window size
5. Multiple of zoom in
6. Length of errorbar cross line
7. Grid line & space



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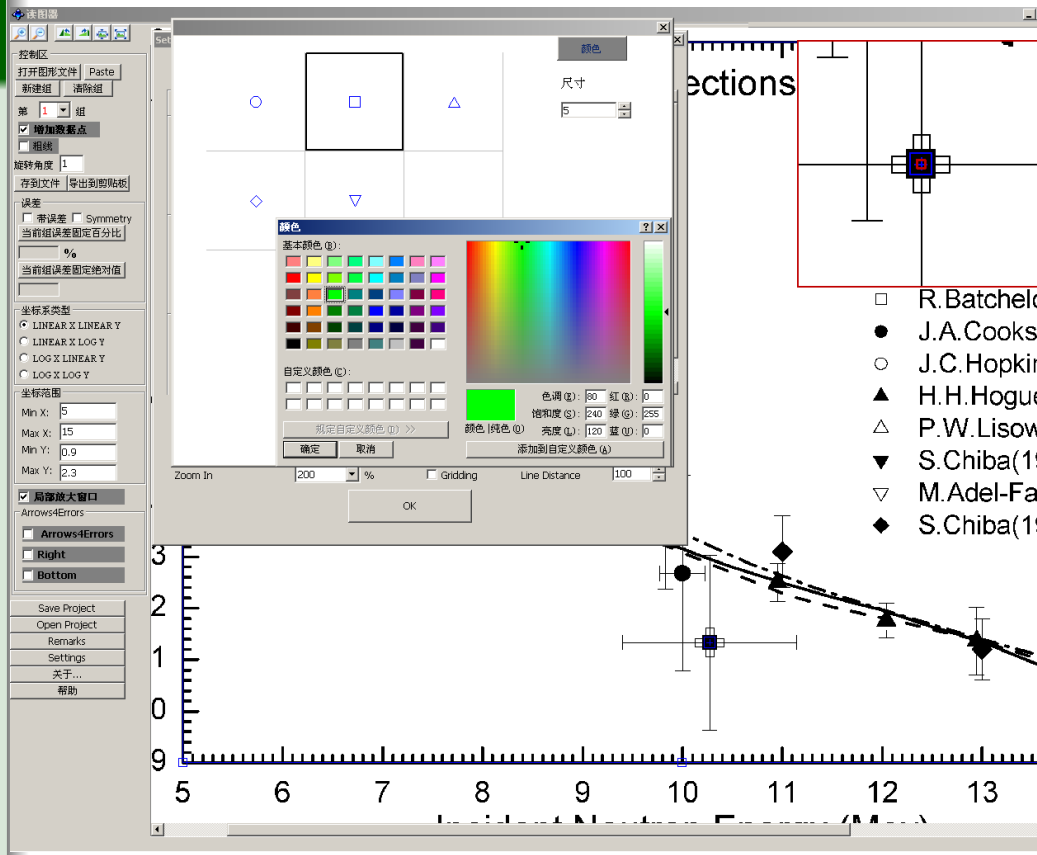

GDgraph: A graph digitizing software

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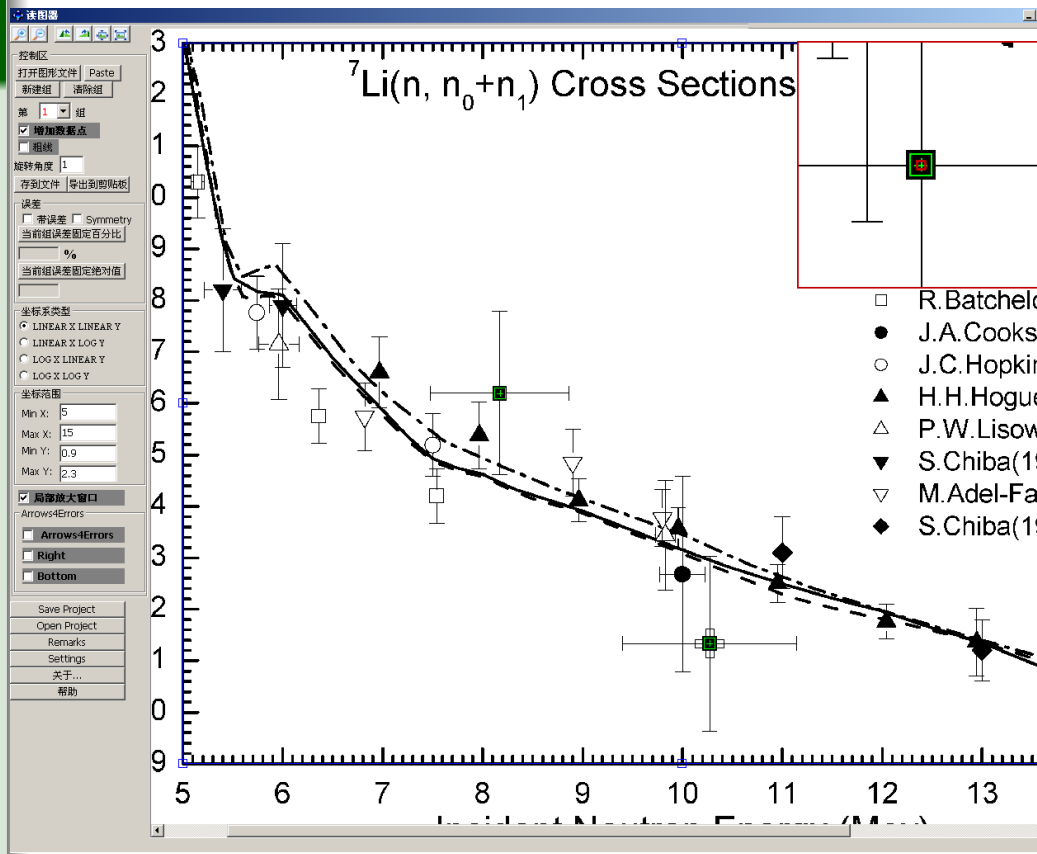

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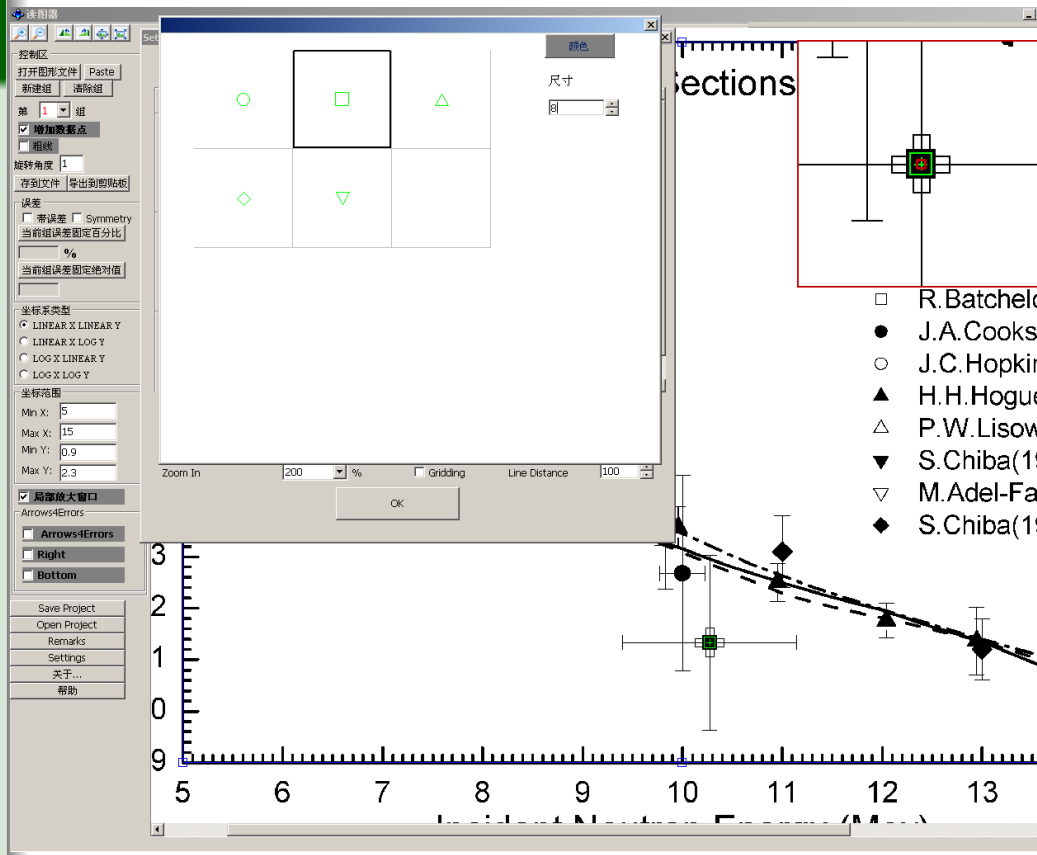

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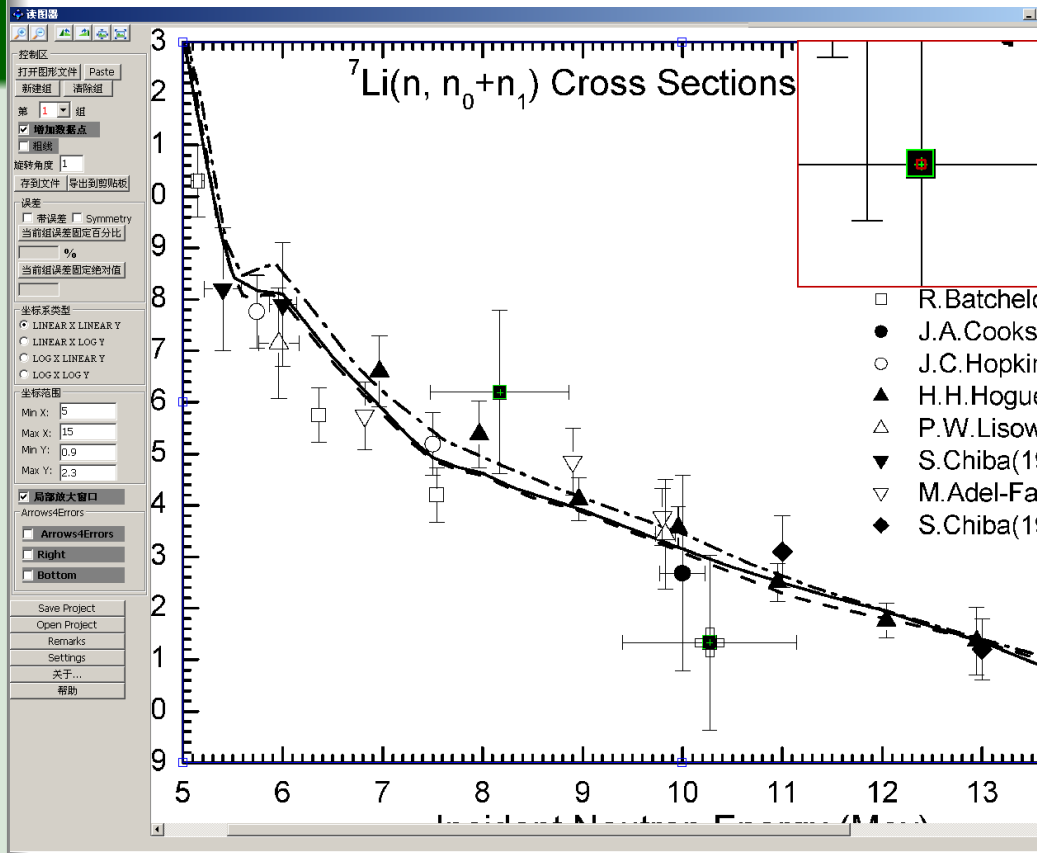

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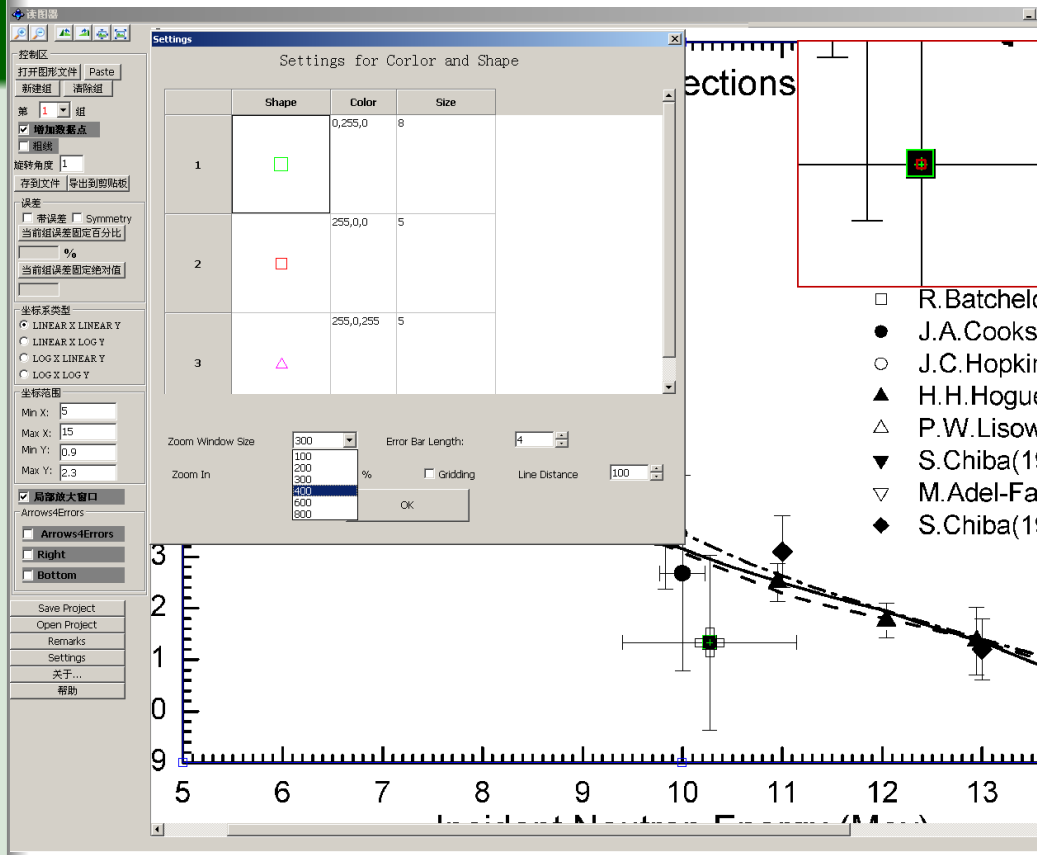

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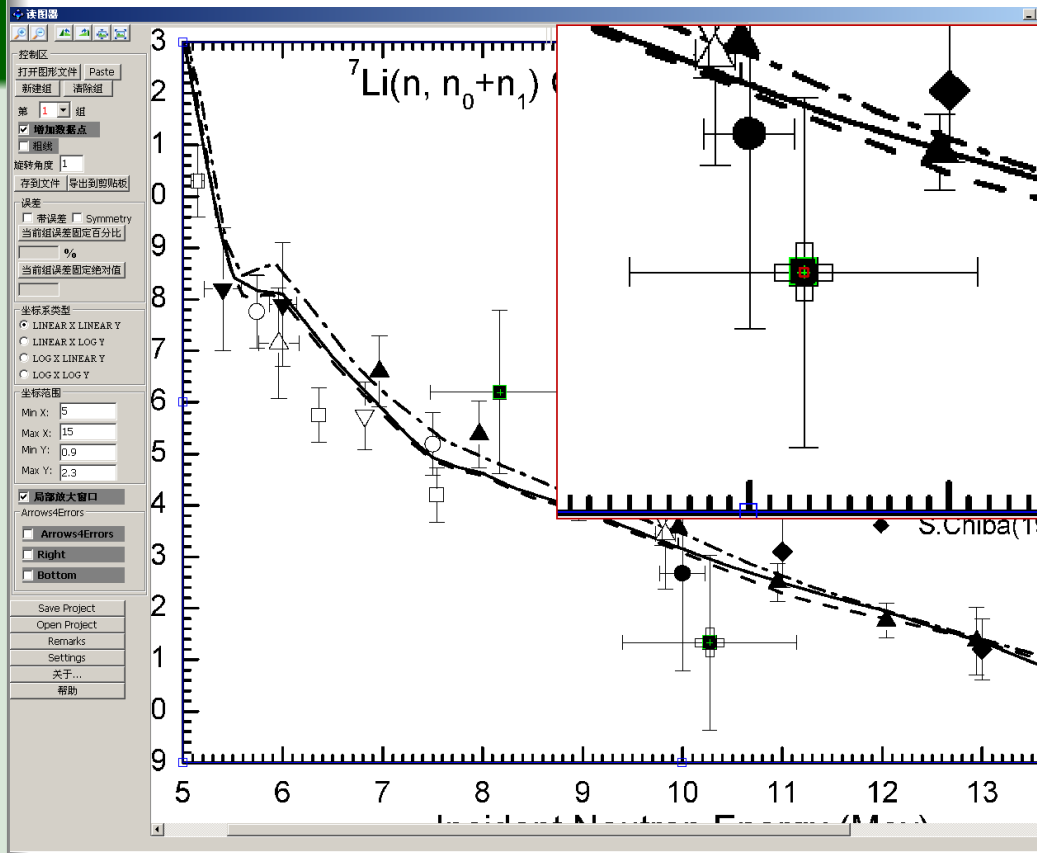

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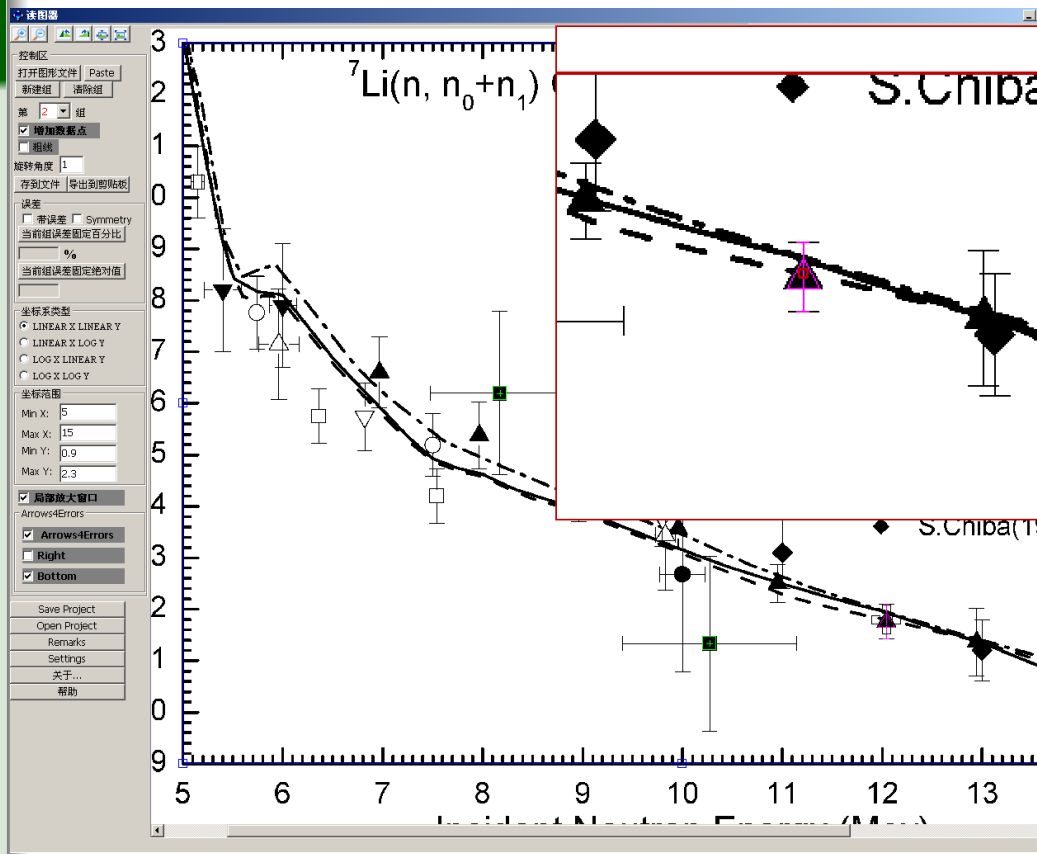

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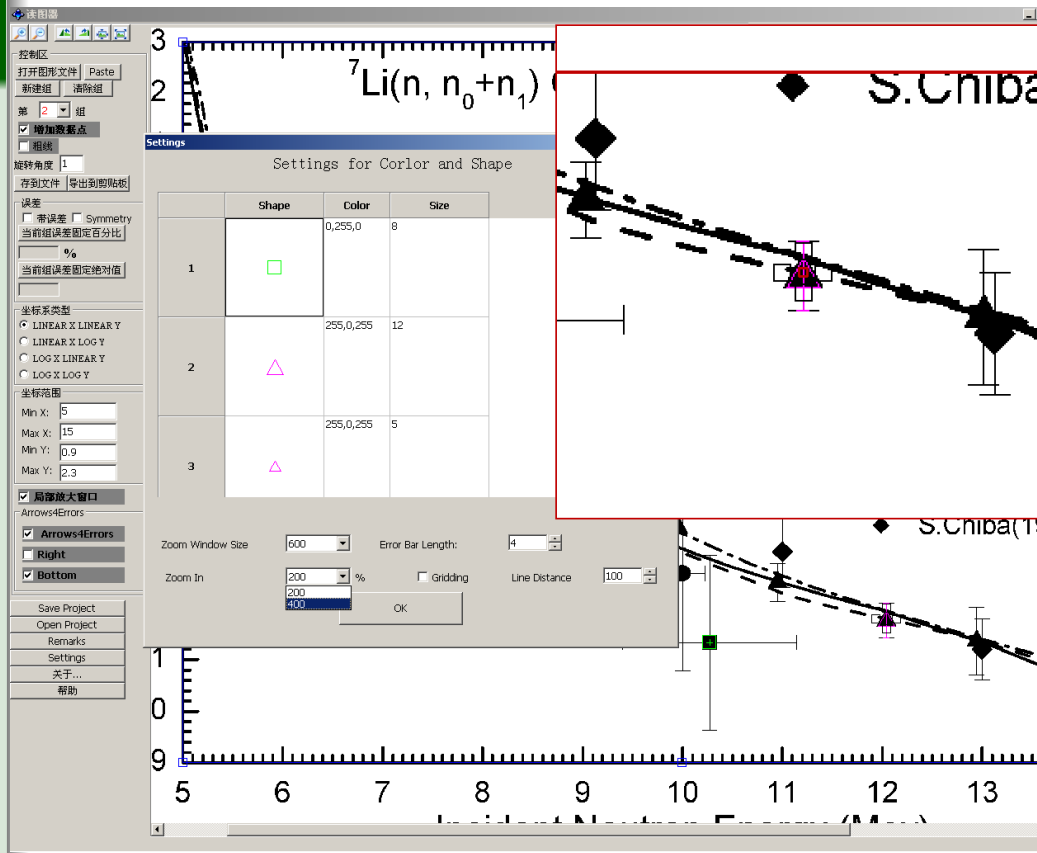

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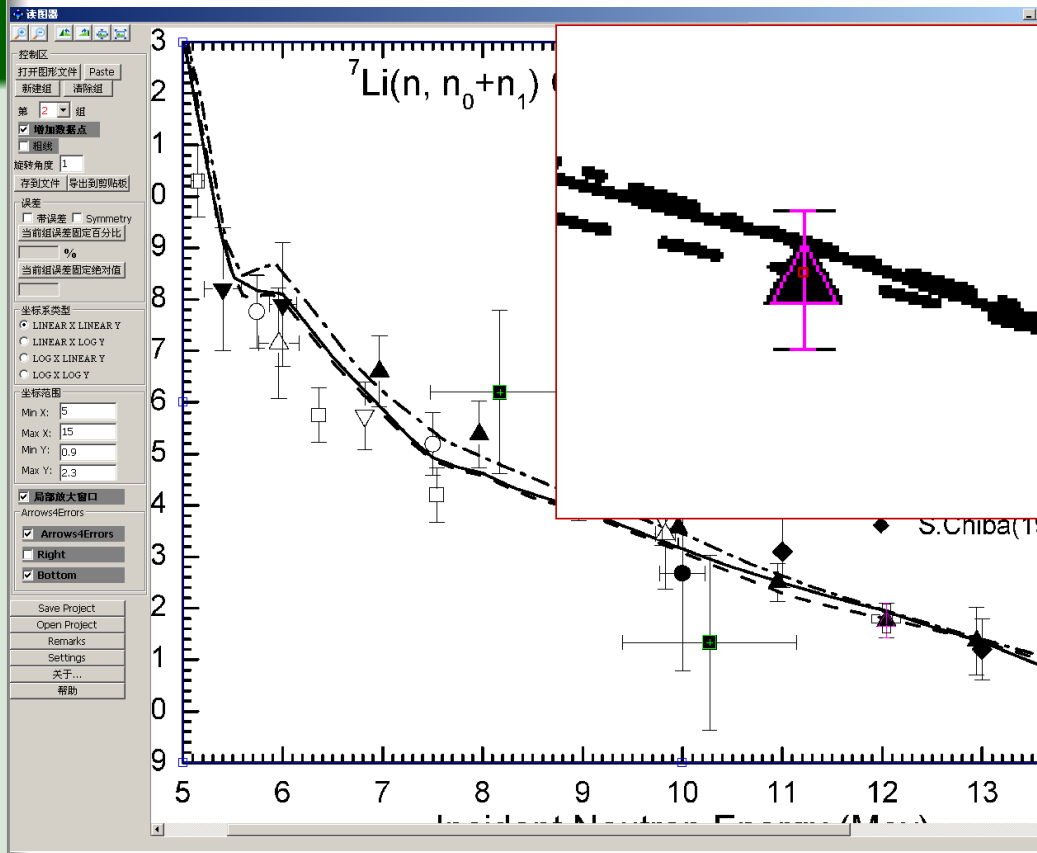

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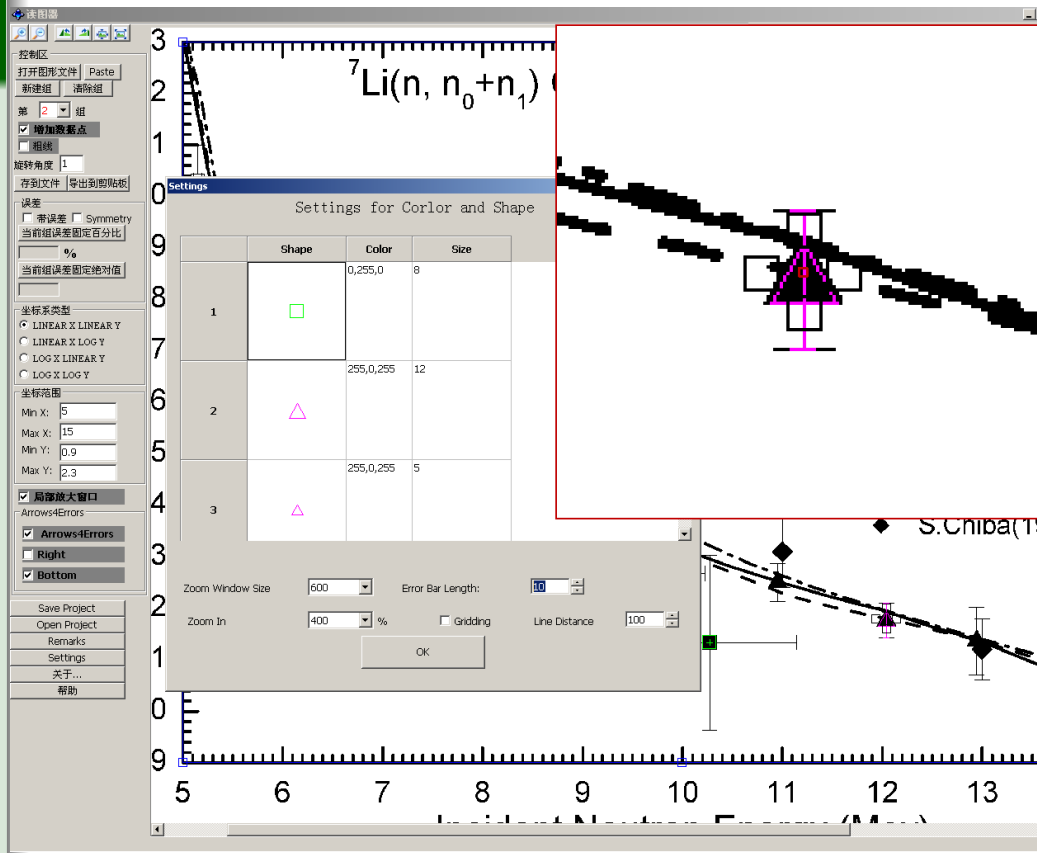

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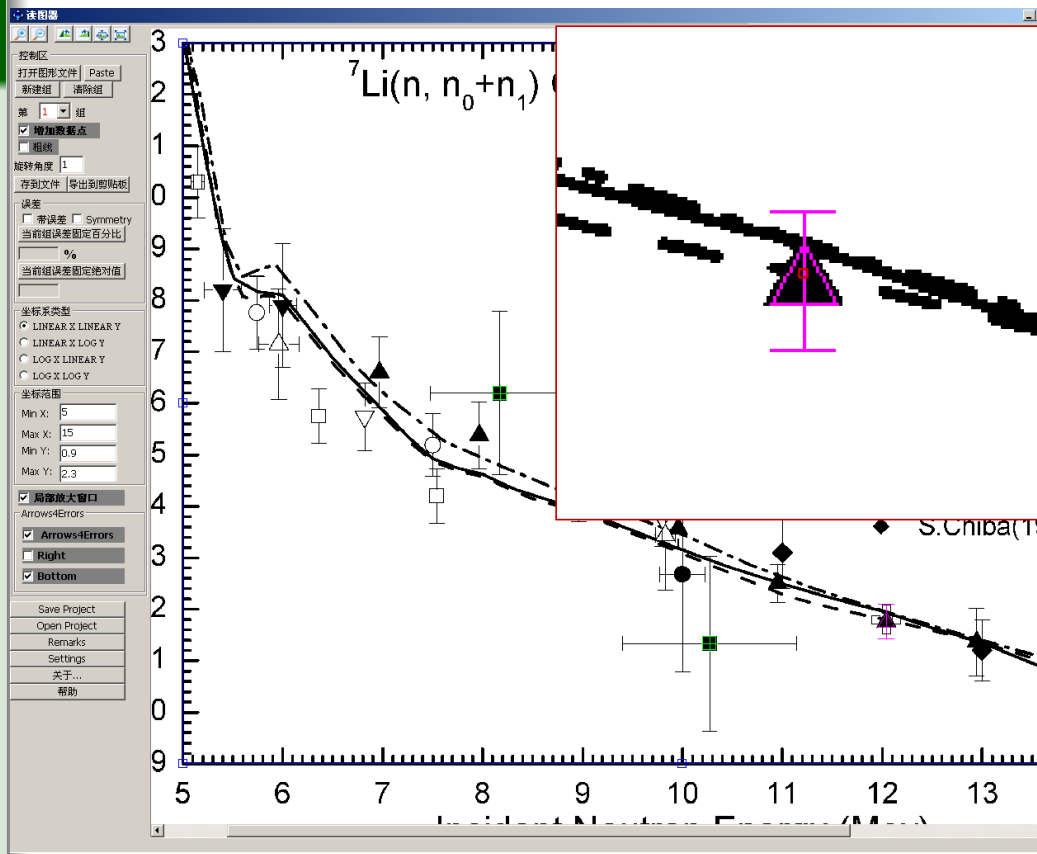

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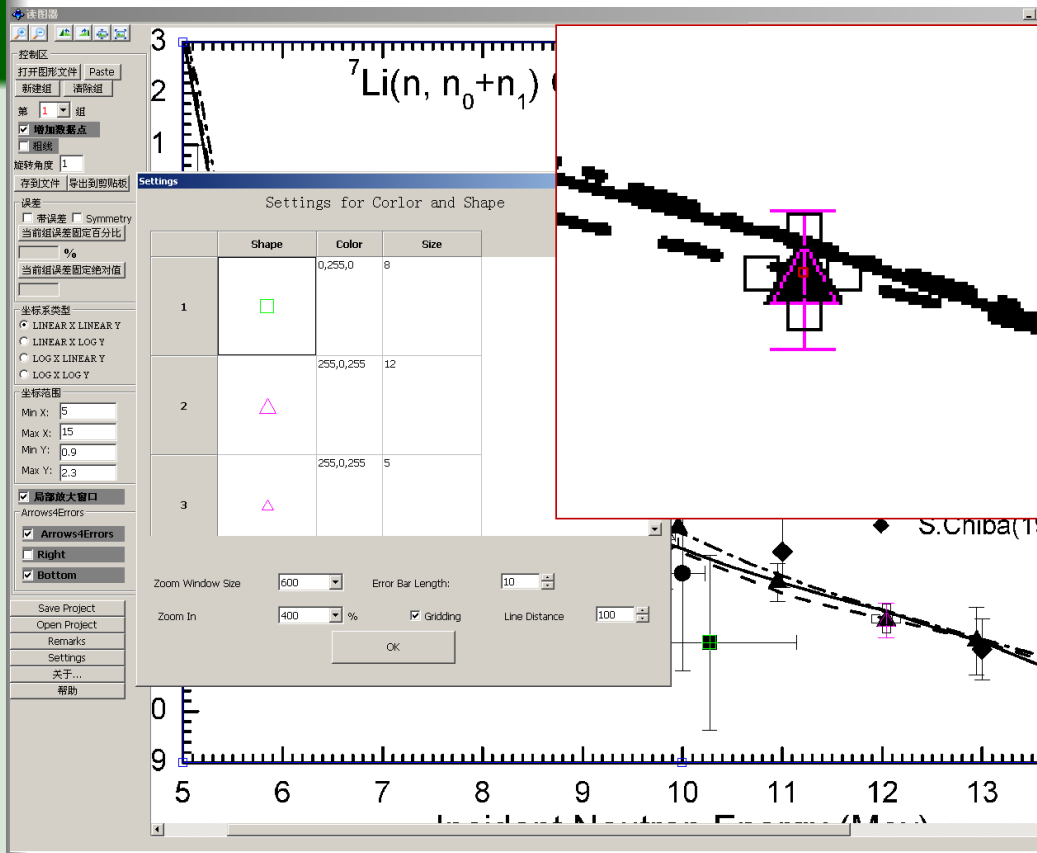

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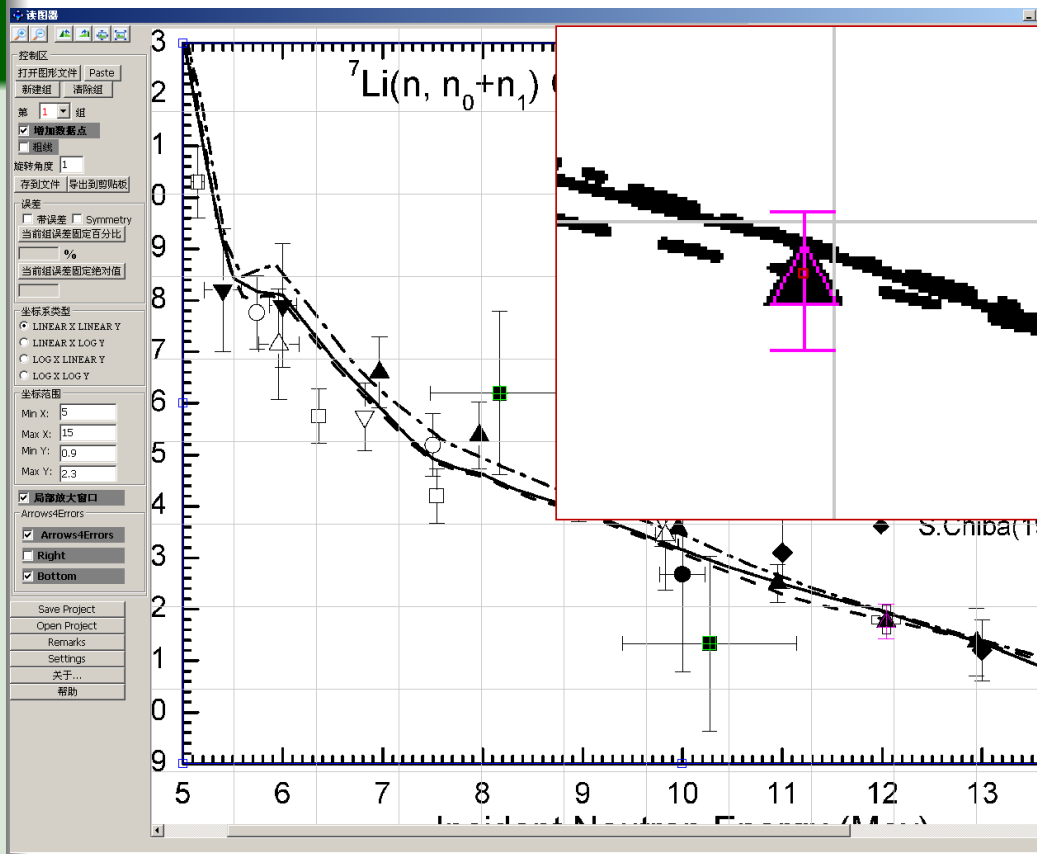

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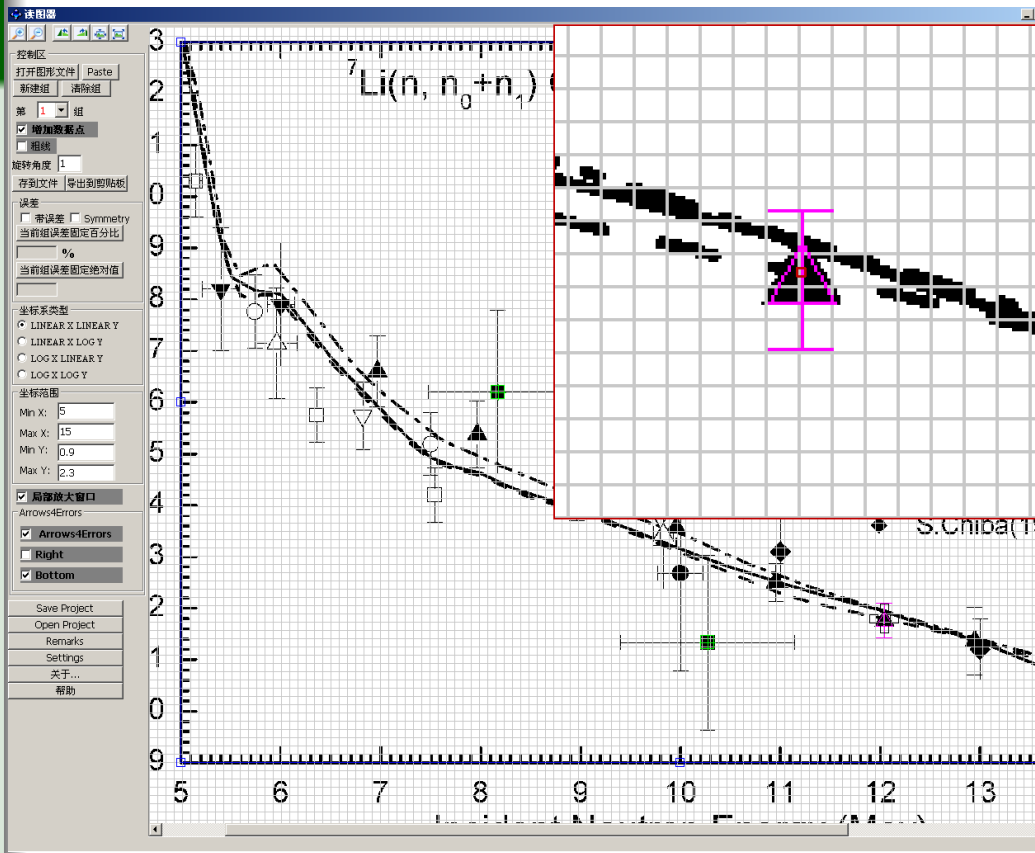

GDgraph: A graph digitizing software

GDgraph-5.0

1. Update at 2013, Perl
2. Chn→Chn&Eng
3. GUI: Dialogue → Single Doc. Inter.
4. Update Project func.
5. X,Y error in symmetry & asymmetry
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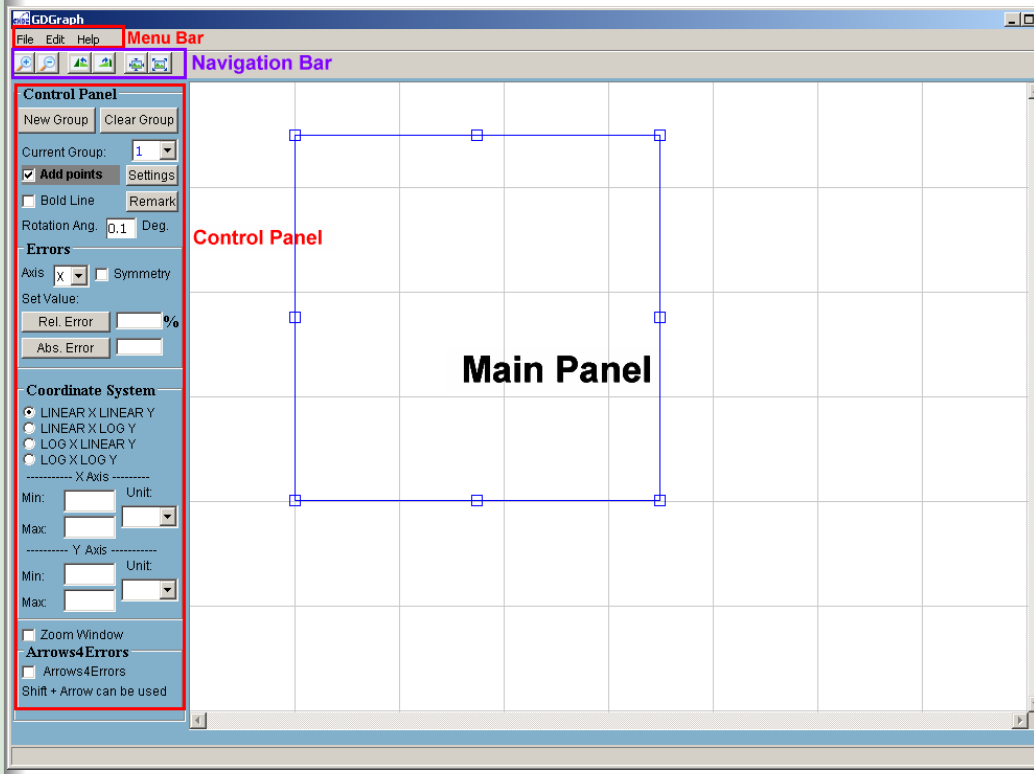

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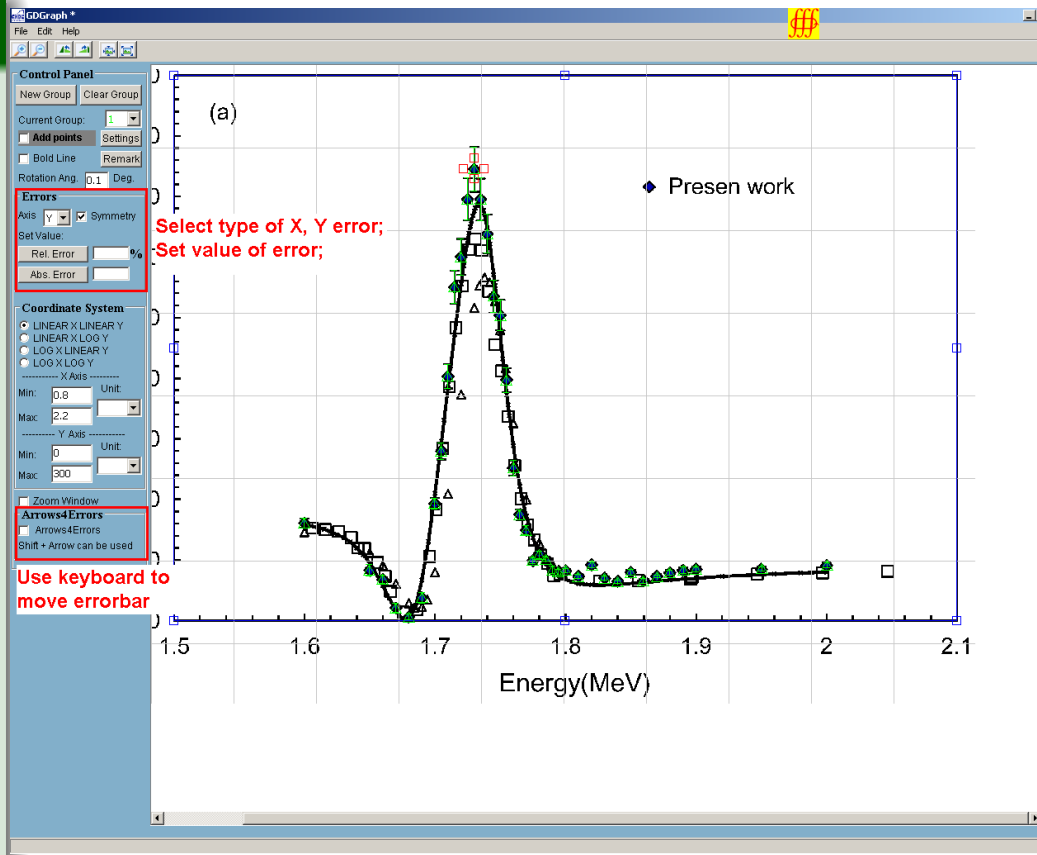

GDgraph: A graph digitizing software

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7. Set unit for coordinate
8. Add output data format
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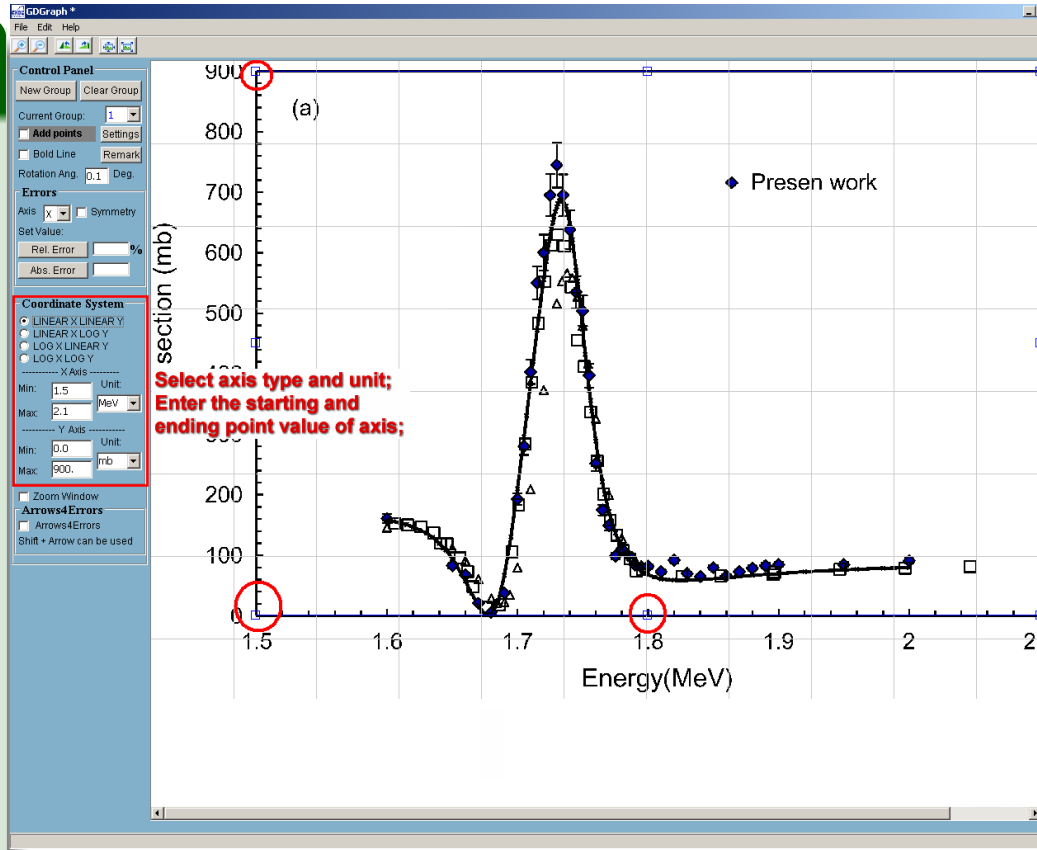

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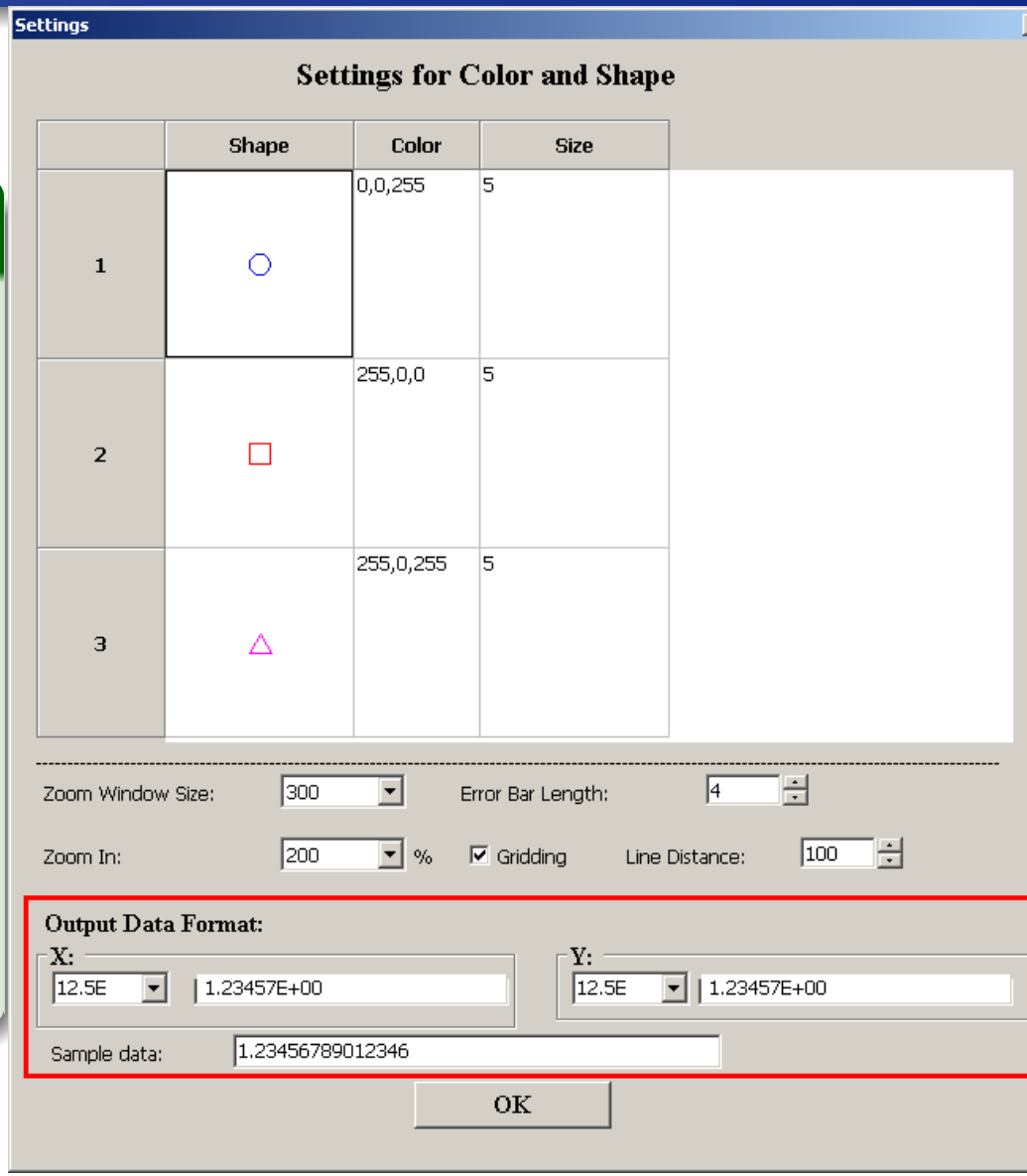

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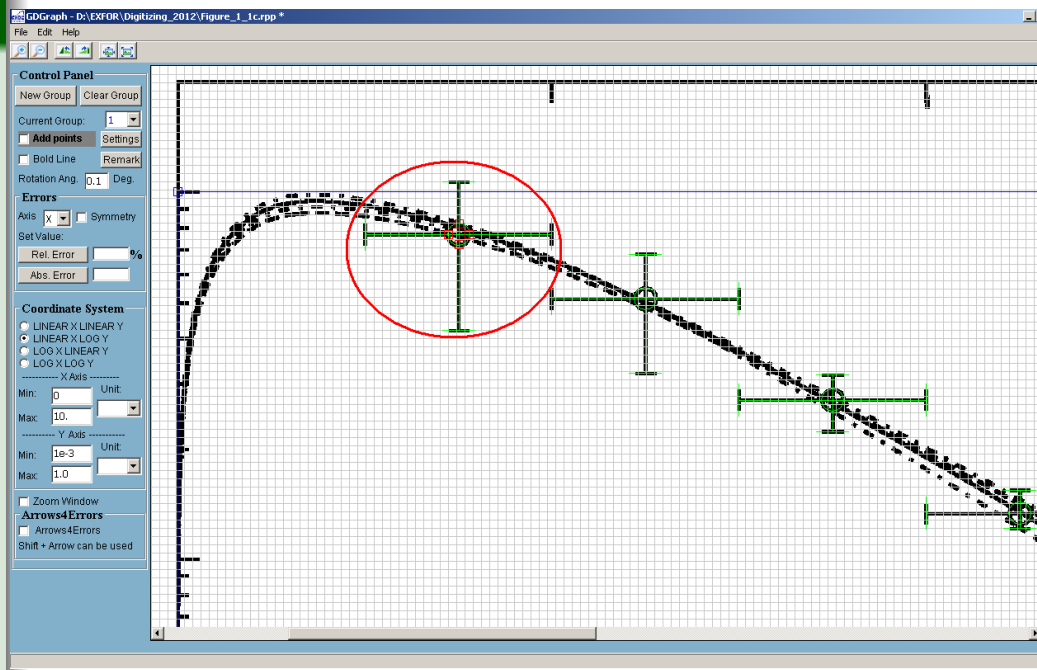

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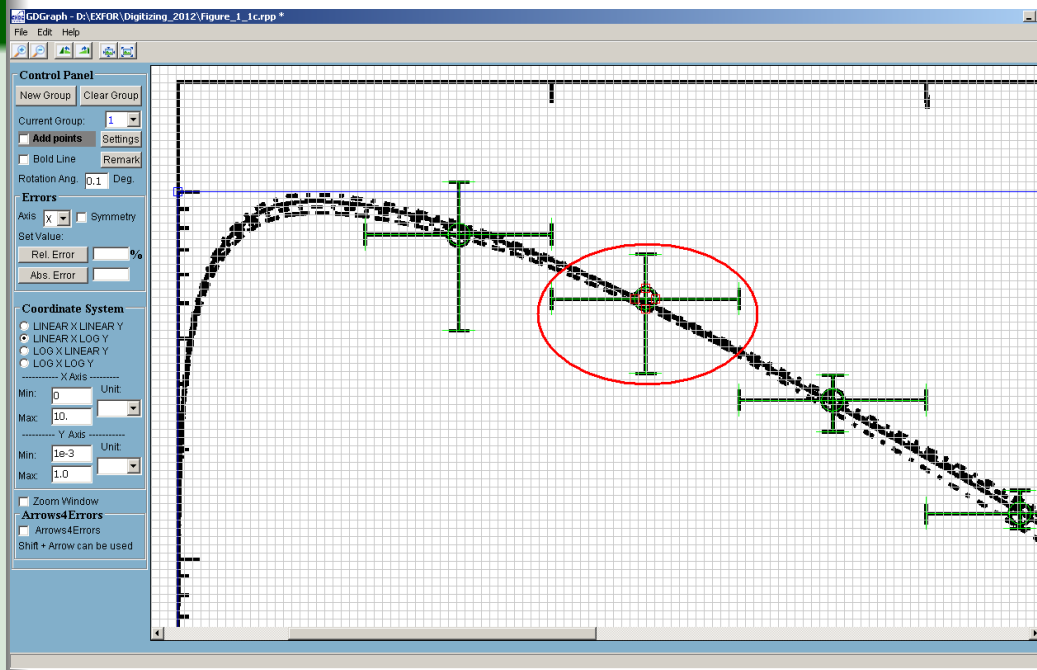

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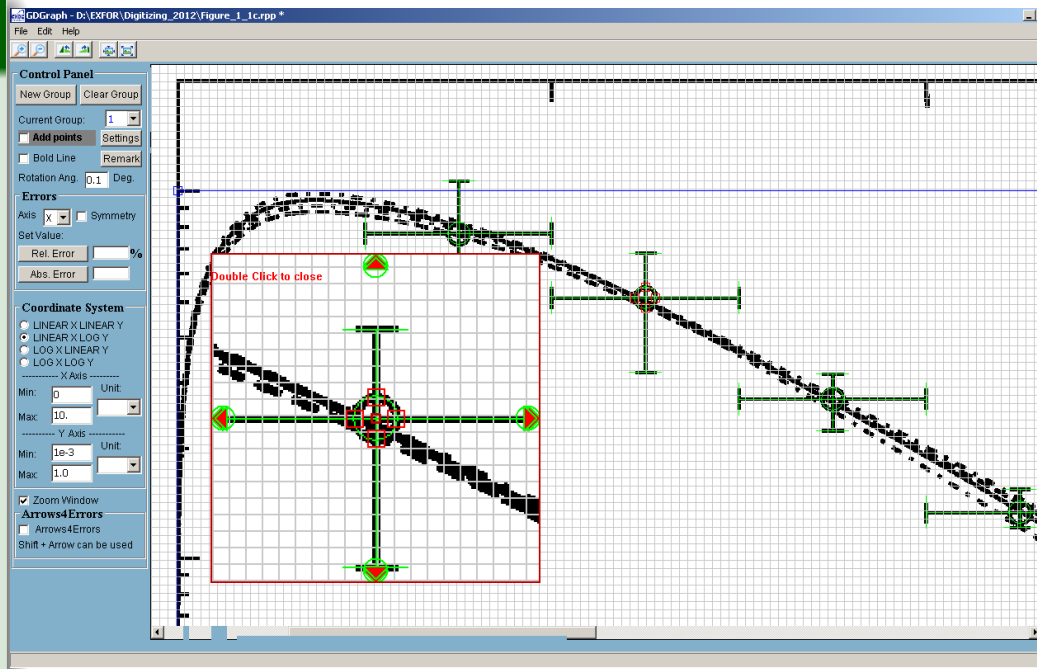

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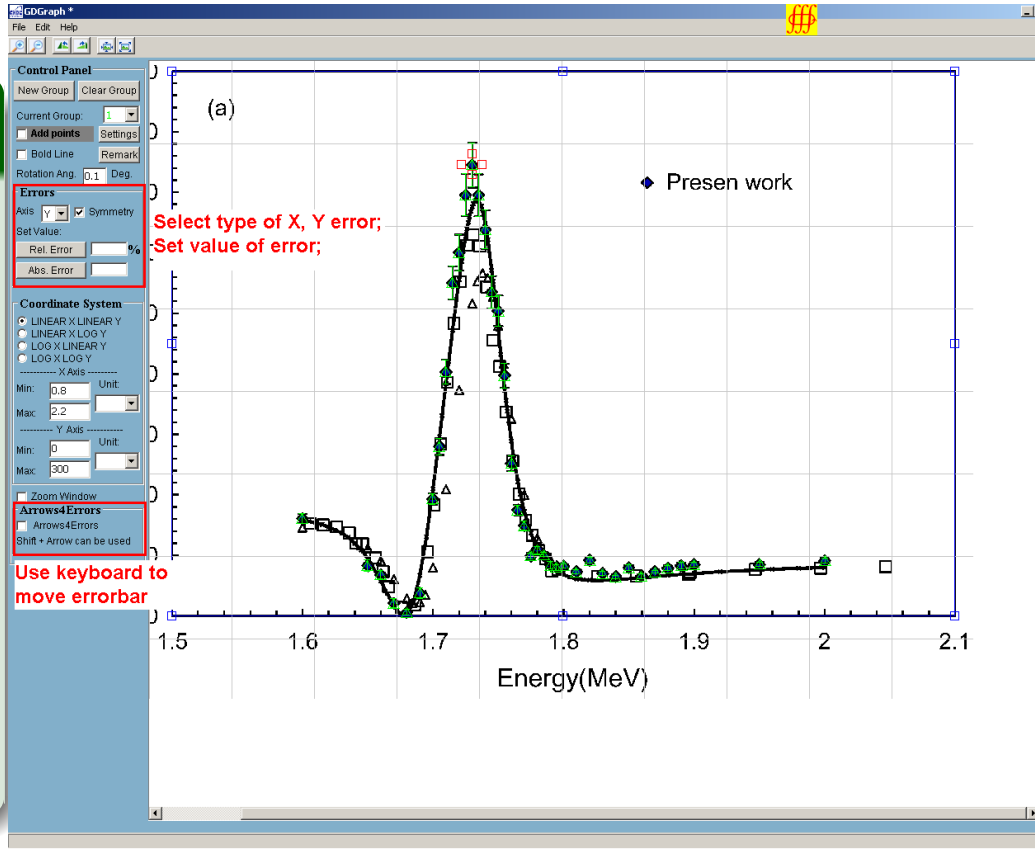

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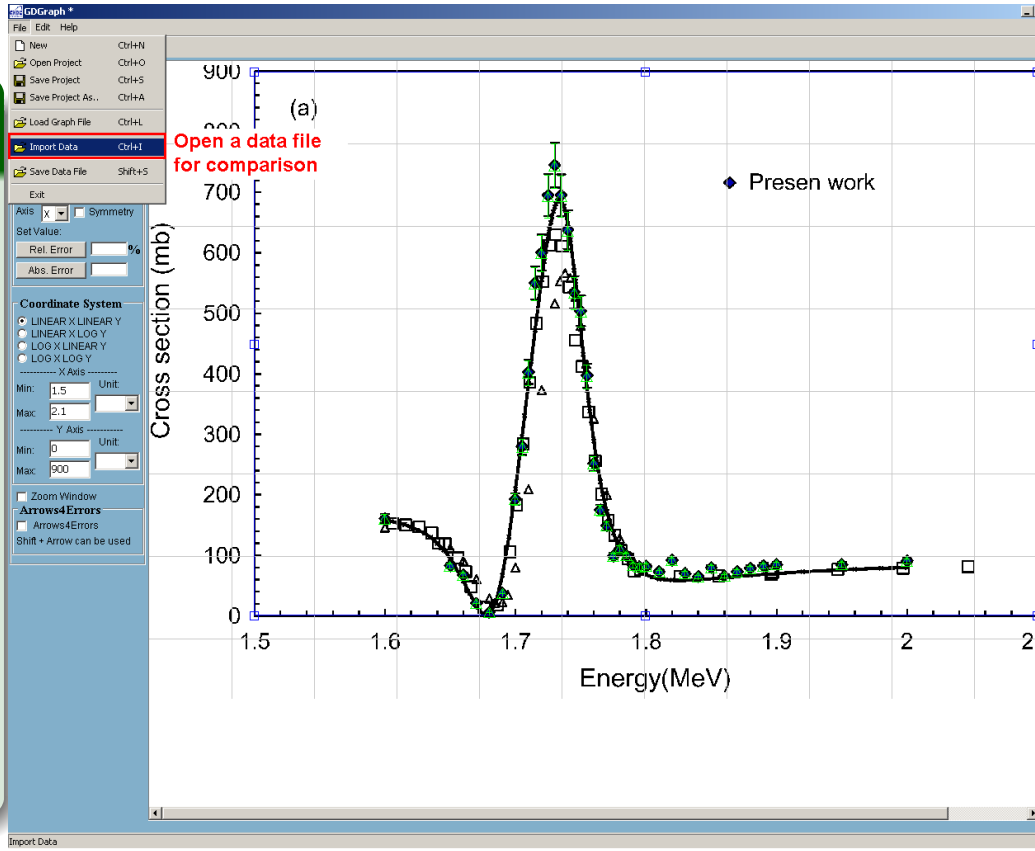

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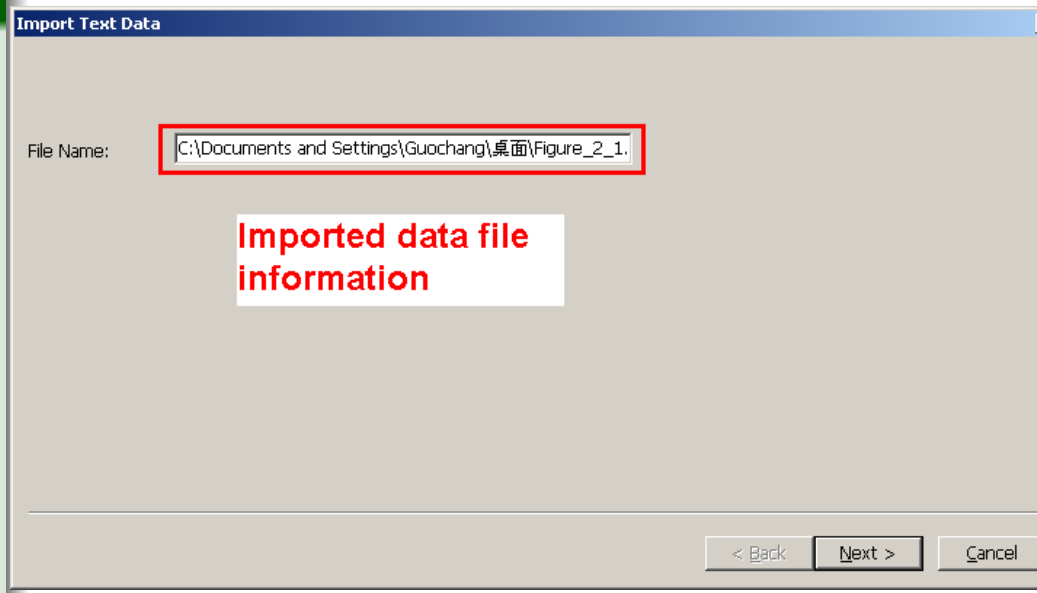

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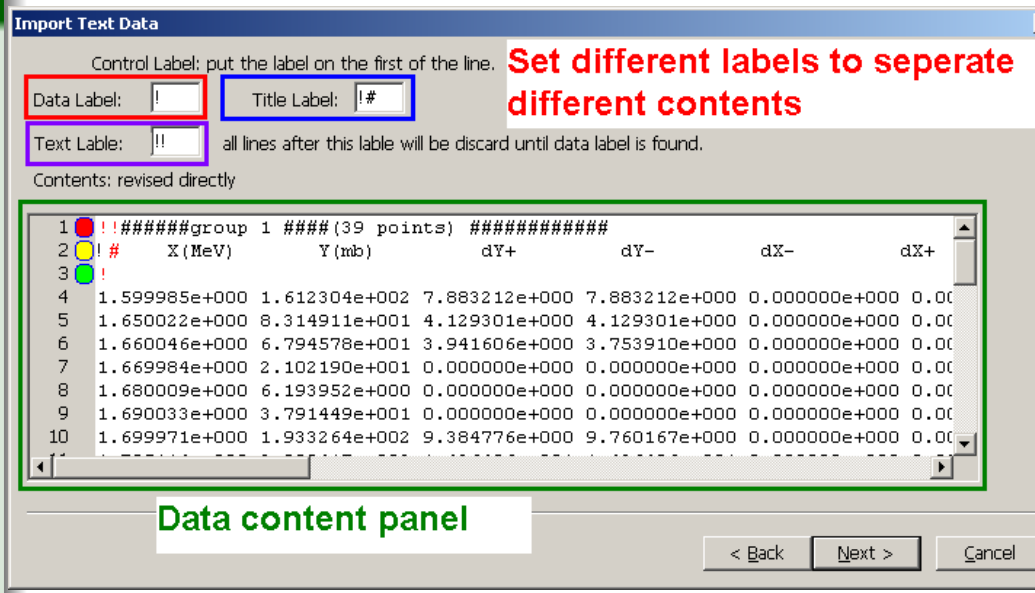

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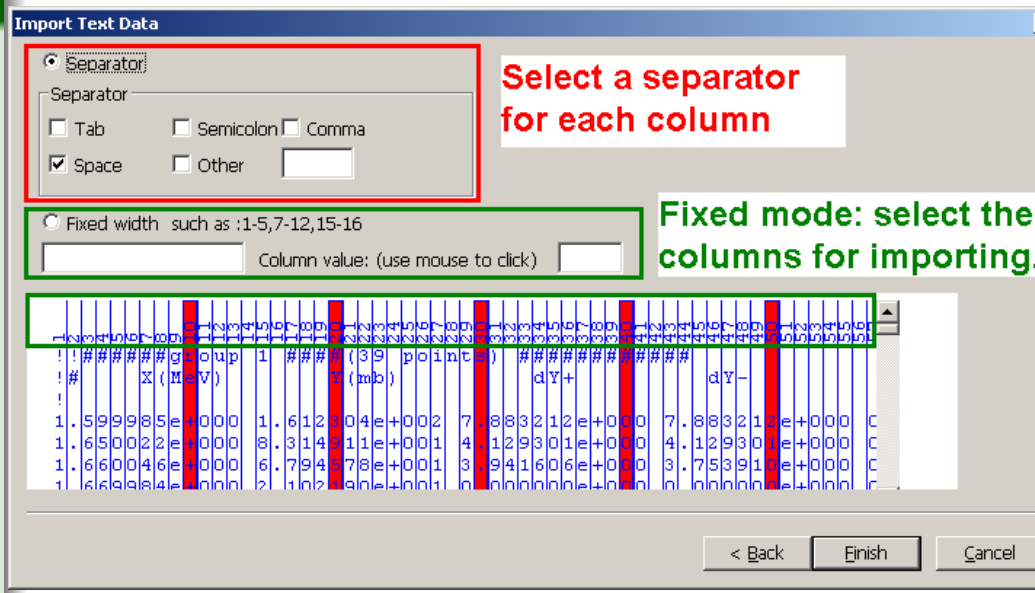

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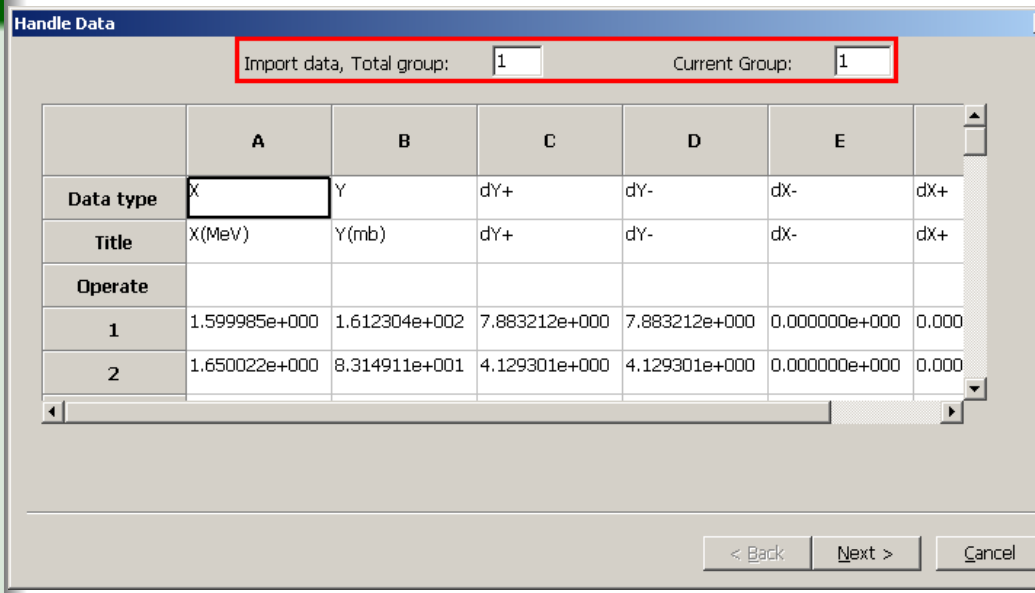

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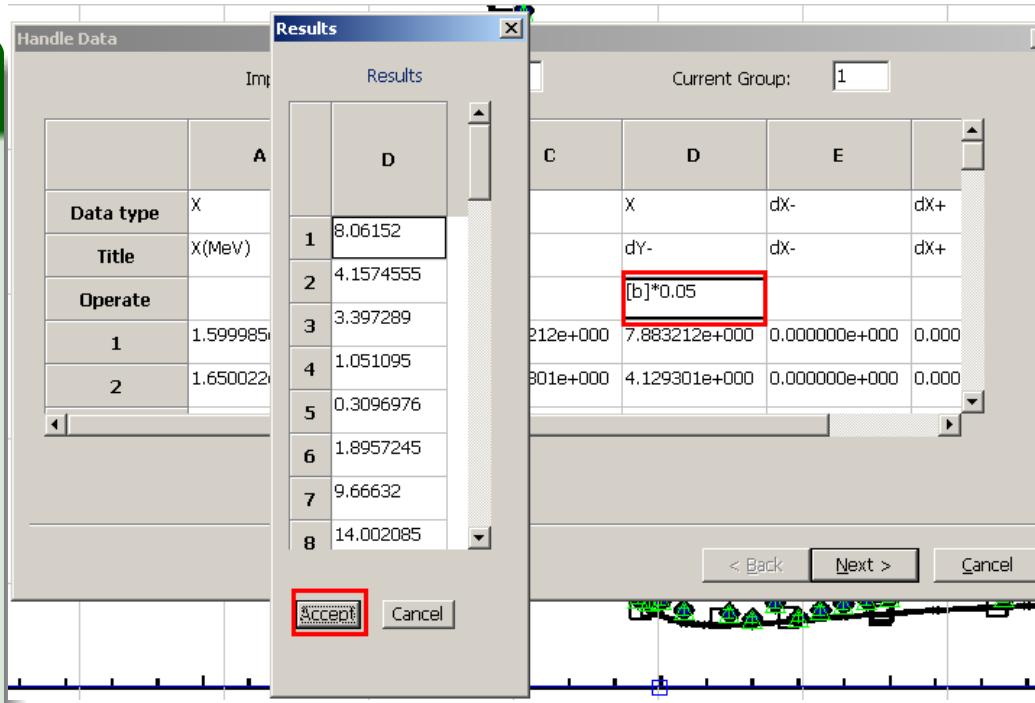

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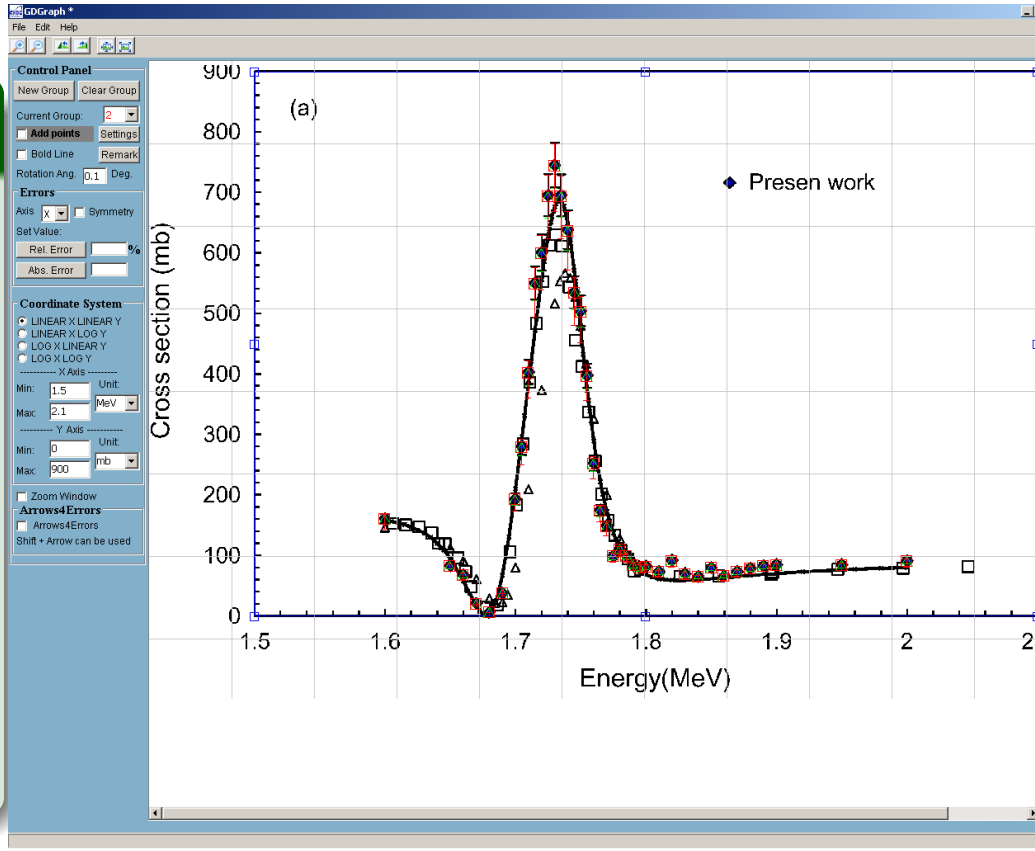

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2 GDgraph: A graph digitizing software

3 Summary

Summary

1. Requirements from evaluation and measurement for developing digitization software
2. GDgraph: a software is developed for digitization since 1997
3. Present version is fit for digitization requirements
4. Some bugs and functions should be developed in future such as symbols, automatic searching axis, ...
5. Adopt good characters and functions from other softwares

Thank you for your attention!

Welcom to China!